

1, 5, 7, 8, 9, 15, 16, 19; and on the other hand Sixtus is right against the correctors in i. 15. The Gregorian correctors, therefore (whose results are given in the Clementine edition), in the main simply restored readings adopted by the Sixtine board and rejected by Sixtus. In the Book of Deuteronomy the Clementine edition follows the Sixtine correctors where it differs from the Sixtine edition: i. 4, 19, 31; ii. 21; iv. 6, 22, 28, 30, 33, 39; v. 24; vi. 4; viii. 1; ix. 9; x. 3; xi. 3; xii. 11, 12, 15, &c.; and every change (except probably vi. 4; xii. 11, 12) is right; while on the other hand in the same chapters there are, as far as I have observed, only two instances of variation without the authority of the Sixtine correctors (xi. 10, 32). But in point of fact the Clementine edition errs by excess of caution. Within the same limits it follows Sixtus against the correctors wrongly in ii. 33; iii. 10, 12, 13, 16, 19, 20; iv. 10, 11, 28, 42; vi. 3; xi. 28; and in the whole book admits in the following passages arbitrary changes of Sixtus: iv. 10; v. 24; vi. 13; xii. 15, 32; xviii. 10, 11; xxix. 23.^c In the N. T., as the report of the Sixtine correctors has not yet been published, it is impossible to say how far the same law holds good; but the following comparison of the variations of the two editions in continuous passages of the Gospels and Epistles will show that the Clementine, though not a pure text, is yet very far purer than the Sixtine, which often gives Old Latin readings, and sometimes appears to depend simply on patristic authority^d (i. e. pp. ll.):—

Sixtine.	Clementine.
Matt i. 23, vocabitur (pp. ll.)	— vocabunt.
ii. 5, Juda (gat. mm. &c.)	— Judae.
13, surge, accipe (?)	— surge et accipe.
iii. 2, appropinquabit (iv. 17), (MSS. Gallic. pp. ll.)	— appropinquavit.
3, de quo dictum est (tol. it.)	— qui dictus est.
10, arboris (Tert.)	— arborum.
iv. 6, ut . . . tollant (it.)	— et . . . tollent.
7, Jesus rursum.	— Jesus: Rursum.
15, Galilaeae (it. am. &c.)	— Galilaea.
16, ambulabat (?)	— sedebat.
v. 11, vobis homines (gat. mm. &c.)	— vobis.
30, abscinde (?).	— abscide.
40, in judicio (it.)	— judicio.
vi. 7, eth. faciunt (it.)	— ethnici.
30, enim (it.)	— autem.
vii. 1, et non judicabimini, nolite condemnare et non condemnabimini (?)	— ut non judicemini.
4, sine, frater (it. pp. ll.)	— sine.
23, a me omnes (it. pp. ll.)	— a me.

^c The common statement that the Clementine edition follows the revision of Alcuin, while the Sixtine gives the true text of Jerome, is apparently a mere conjectural assertion. In Deuteronomy, Sixtus gives the Alcuinian reading in the following passages: i. 19; iv. 30, 33; xxi. 6; and I have not observed one passage where the Clementine text agrees with that of Alcuin unless that of Sixtus does also.

Passages have been taken from the Pentateuch, because in that Vercellone has given complete and trustworthy materials. The first Book of Samuel, in which the later corruptions are very extensive, gives results generally of the same character. Great and obvious interpolations are preserved both in the Sixtine and Clementine editions: iv. 1; v. 6; x. 1; xiii. 15; xiv. 22, 41; xv. 3, 12; xvii. 36; xx. 15 (chiefly from the LXX.). The Sixtine text gives the old reading displaced from the Clementine: iii. 2, 3; iv. 1, 4; vii. 10 (?); ix. 1 (?), 25. The Clementine restores

Sixtine.	Clementine.
Matt. vii. 25, supra (pp. ll. tol. &c.)	— super.
29, scribae (it.)	— scribae eorum.
viii. 9, allo (it. am. &c.)	— alii.
12, ubi (pp. ll.)	— ibi.
18, jussit discipulos (it.)	— jussit.
20, caput suum (it. tol.)	— caput.
28, venisset Jesus (it.)	— venisset.
32, magno impetu (it.)	— impetu.
33, haec omnia (?)	— omnia.
34, rogabant eum ut Jesus (?)	— rogabant ut.
Ephes. i. 15, in Christo J. (pp. ll. Bodl.)	— in Domino J.
21, dominationem (?)	— et dominationem
ii. 1, vos convificavit (pp. ll.)	— vos.
11, vos eratis (pp. ll. Bodl. &c.)	— vos.
—, dicebamini (pp. ll.)	— dicimini.
12, qui (pp. ll. Bodl. &c.)	— quod.
22, Spiritu Sancto (pp. ll. Sang. &c.)	— Spiritu.
iii. 8, mihi enim (pp. ll.)	— mihi.
16, virtutem (it.)	— virtute.
—, in interiore homine (pp. ll. Bodl.)	— in interiore ho- minem.
iv. 22, deponite (it.)	— deponere.
30, in die (pp. ll. Bodl. &c.)	— in diem.
v. 26, mundans eam (pp. ll.)	— mundans.
27, in gloriosam (?)	— gloriosam.
vi. 15, in praeparationem (it.)	— in praeparatione.
20, in catena ista (it. ?)	— in catena ita.

(Some of the readings of Bodl. (513, (3) 22) are added. It. is used, as is commonly done, for the old texts generally; and the notation of the MSS. is that usually followed.)

28. While the Clementine edition was still recent some thoughts seem to have been entertained of revising it. Lucas Brugensis made important collections for this purpose, but the practical difficulties were found to be too great, and the study of various readings was reserved for scholars (Bellarmin. ad Lucam Brug. 1606). In the next generation use and controversy gave a sanctity to the authorized text. Many, especially in Spain, pronounced it to have a value superior to the originals, and to be inspired in every detail (comp. Van Ess, 401, 402; Hody, III. ii. 15); but it is useless to dwell on the history of such extravagancies, from which the Jesuits at least, following their great champion Bellarmin, wisely kept aloof. It was a more serious matter that the universal acceptance of the papal text checked the critical study of the materials on which it was professedly based. At length, however, in 1706, Martianay published a new, and in

the old reading against Sixtus: i. 9, 19; ii. 11, 17, 26, 30; iv. 9 (?), (21); vi. 9; ix. 7; x. 12; xii. 6, 11, 15, 23; xiii. 18; xiv. 2 (?), 14, 15. Thus in fifteen chapters Clement alone gives the old readings sixteen times, Sixtus alone five times. Vercellone, in the second part of his *Variæ Lectiones*, which was published after this article was printed, promises a special discussion of the interpolations of 1 Sam., which were, as might have been expected, expunged by the Sixtine correctors. Vercellone ad 1 Reg. iv. 1.

^d The variations between the Sixtine and Clementine editions were collated by T. James, *Bellum papale, & concordia discors* . . . Lond. 1600; and more completely with a collation of the Clementine editions, by H. de Buker, top, *Luz de luce*, lib. iii. pp. 315 ff. Vercellone, correcting earlier critics, reckons that the whole number of variations between the two revisions is about 3000 (*1 relogio* xlvi. nota).

the main better text, chiefly from original MSS., in his edition of Jerome. Vallarsi added fresh collations in his revised issue of Martianay's work, but in both cases the collations are imperfect, and it is impossible to determine with accuracy on what MS. authority the text which is given depends. Sabatier, though professing only to deal with the Old Latin, published important materials for the criticism of Jerome's Version, and gave at length the readings of Lucas Brugensis (1743). More than a century elapsed before anything more of importance was done for the text of the Latin version of the O. T., when at length the fortunate discovery of the original revision of the Sixtine correctors again directed the attention of Roman scholars to their authorised text. The first-fruits of their labours are given in the volume of Vercellone already often quoted, which has thrown more light upon the history and criticism of the Vulgate than any previous work. There are some defects in the arrangement of the materials, and it is unfortunate that the editor has not added either the authorised or corrected text; but still the work is such that

every student of the Latin text must wait anxiously for its completion.

29. The neglect of the Latin text of the O. T. is but a consequence of the general neglect of the criticism of the Hebrew text. In the N. T. far more has been done for the correction of the Vulgate, though even here no critical edition has yet been published. Numerous collations of MSS., more or less perfect, have been made. In this, as in many other points, Bentley pointed out the true path which others have followed. His own collation of Latin MSS. was extensive and important (comp. Ellis, *Bentley Critica Sacra*, xxxv. ff.). Griesbach added new collations, and arranged those which others had made. Lachmann printed the Latin text in his larger edition, having collated the *Codex Fuldensis* for the purpose. Tischendorf has laboured among Latin MSS. only with less zeal than among Greek. And Tregelles has given in his edition of the N. T. the text of *Cod. Amiatinus* from his own collation with the variations of the Clementine edition. But in all these cases the study of the Latin was merely ancillary to that of the Greek text.

* The materials which Bentley collected (see p. 1711, note f) are an invaluable help for investigation, but they will not supersede it. It is, indeed, impossible to determine on what principle he inserted or omitted variations. Sometimes he notes with the greatest care discrepancies of orthography, and at other times he neglects important differences of text. Thus in John i. 18-51 he gives correctly 23 variations of the Cambridge MS. (Kk. 1, 2) and omits 51; and in Luke i. 1-39 he gives 13 variations of St. Chad's Gospels and omits 30; and there is nothing in the character of the readings recorded which can have determined the selection, as the variations which are neglected are sometimes noted from other MSS., and are in themselves of every degree of importance. A specimen from each of the volumes which contain his collations will show the great amount of labour which he bestowed upon the work; and, hitherto, no specimen has been published. The student may find it interesting to compare the variations noted with those in Table B.

Coll. SS. Trin. Cambr., Mark ix. 45-49.
 B. 17, 5.
 1 2 ρ μ ξ Et si pes tuus te scandalizat, amputa illum: bonum est tibi claudum introire in vitam aeternam, quam duos pedes habentem mitti in gehennam ignis inextinguibilis: [ubi vermis eorum non moritur, et ignis non exstinguitur. Quod si oculus tuus scandalizat te ei] ce eum: bonum est tibi luscum introire in regnum Dei, quam duos oculos habentem mitti in gehennam ignis:] ubi vermis eorum non moritur, et ignis non exstinguitur. Omnis [enim] igne salietur, et omnis victima [sale] salietur. Bonum est sal: quod si sal insulsum fuerit, in quo illud condietis?

Coll. SS. Trin. Cambr. Mark ix. 45-49.
 (B. 17, 5.) Mμ
 After χ sal::: φ sic Habete in vobis sal, et pacem habete inter vos.
 salem α ε ο π σ τ Η ξ χ || omnes enim igne examinantur μ.

In this excerpt α—φ (except γ) represent French MSS. collated chiefly by T. Walker; M, H, the MSS. in the Brit. Mus. marked *Harl.* 2788, *Harl.* 2826 respectively; ξ, the Gospels of St. Chad; χ, the Gospels of Mac Regol; γ, the Gospels of St. John C. Oxon. (comp. the lists p. 1692, seq.).

Coll. SS. Trin. Cambr. Mark ix. 45-49.
 (B. 17, 14.) 2 EHOTD
 φ ξ 1 2 P K Et si pes tuus te scandalizat, amputa illum: bonum est tibi claudum introire in vitam aeternam, quam duos pedes habentem mitti in gehennam ignis inextinguibilis: ubi vermis eorum non moritur, et ignis non exstinguitur. [Quod si oculus tuus scandalizat te, ejice eum: bonum est tibi luscum introire in regnum Dei, quam duos oculos habentem mitti in gehennam ignis, ubi vermis eorum non moritur, et ignis non exstinguitur.]
 1 2 D clo E Omnis enim igne salietur et omnis victima [sale] salietur. Bonum est sal: quod si sal insulsum fuerit, in quo illud condietis? Habete in vobis sal, et pacem habete inter vos.
 δ K T P B (semper) rie Z.
 gue Z. [] del. Z.
 ΔK inextinguibilis (erased) rie Z (erased) em Y
 gue Z (erased) Δeorum K (erased)
 ni O alli H B (sic) E
 D φ Y ξ Z F del. O B P H K
 lum P sal P K
 dietur (corr. -is) E.
 Z R salem B D E

The collations in this volume are, as will be seen, some what confused. Many are in Bentley's hand, who has added numerous emendations of the Latin text in B. 17 14. Thus, on the same page from which this example is taken, we find: Mark ix. 20, *ab infantia*. fo. leg. *ab infanti*. παιδιόθεν. x. 14, *Quos quum videret*. forte leg. *Quod cū videret* (sic a p. m. O: a later note). x. 38, *Et baptismum quo ego*. leg. *Aut baptismum*, quod ego. For the MSS. quoted, see the lists already referred to.

Probably from the great antiquity and purity of the *Codd. Amiatinus* and *Fuldensis*, there is comparatively little scope for criticism in the revision of Jerome's Version; but it could not be an unprofitable work to examine more in detail than has yet been done the several phases through which it has passed, and the causes which led to its gradual corruption. (A full account of the editions of the Vulgate is given by Masch [Le Long], *Bibliotheca Sacra*, 1778-90. Copies of the Sixtine and Clementine editions are in the Library of the British Museum.)

VI. THE MATERIALS FOR THE REVISION OF JEROME'S TEXT.—30. Very few Latin MSS. of the O. T. have been collated with critical accuracy. The Pentateuch of Vercellone (*Romae*, 1860) is the first attempt to collect and arrange the materials for determining the Hieronymian text in a manner at all corresponding with the importance of the subject. Even in the N. T. the criticism of the Vulgate text has always been made subsidiary to that of the Greek, and most of the MSS. quoted have only been examined cursorily. In the following list of MSS., which is necessarily very imperfect, the notation of Vercellone (from whom most of the details, as to the MSS. which he has examined, are derived) has been followed as far as possible; but it is much to be regretted that he marks the readings of MSS. Correctoria and editions in the same manner.

i. *MSS. of Old Test. and Apocrypha.*

A (*Codex Amiatinus*, Bibl. Laurent. Flor.) at Florence, written about the middle of the 6th cent. (cir. 541, Tischdf.) with great accuracy, so that both in age and worth it stands first among the authorities for the Hieronymian text. It contains Jerome's Psalter from the Hebrew, and the whole Latin Bible, with the exception of Baruch. The variations from the Clementine text in the N. T. have been edited by F. F. Fleck (1840); and Tischendorf and Tregelles separately collated the N. T. in 1843 and 1846, the former of whom published a complete edition (1850; 2nd ed. 1854) of this part of the MS., availing himself also of the collation of Tregelles. The O. T. has been now collated by Vercellone and Palmieri for Vercellone's *Variae Lectiones* (Vercellone, i. p. lxxxiv.). The MS. was rightly valued by the Sixtine correctors, who in many places follow its authority alone, or when only feebly supported by other evidence: *e. g.* Gen. ii. 18, v. 26, vi. 21, vii. 3, 5, ix. 18, 19, x. 1.

B (*Codex Toletanus*, Bibl. Eccles. Tolet.), at Toledo, written in Gothic letters about the 8th cent. The text is generally pure, and closely approaches to that of A, at least in O. T. A collation of this MS. with a Louvain edition of the Vulgate (1569, fol.) was made by Christopher Palomares by the command of Sixtus V., and the Sixtine correctors set a high value upon its readings: *e. g.* Gen. vi. 4. The collation of Palomares was published by Bianchini (*Vindiciae*, pp. lv. ff.), from whom it has been reprinted by Migne (*Hieron. Opp.* x. 875 ff.). Vercellone has made use of the original collation preserved in the Vatican Library, which is not always correctly transcribed by Bianchini; and at the same time he had noted the various readings which have been neglected owing to the difference between the Louvain and Clementine texts. The MS. contains all the Latin Bible (the Psalter from the Hebrew), with the exception of Baruch. A new collation of the MS. is still desirable; and for

the N. T. at least the work is one which might easily be accomplished.

C (*Codex Paullinus*, v. *Carolinus*, Romae, Mon. S. Benedict. ap. Basil. S. Paulli extr. moenia), a MS. of the whole Latin Bible, with the exception of Baruch. Vercellone assigns it to the 9th century. It follows the recension of Alcuin, and was one of the MSS. used by the original board appointed by Pius IV. for the revision of the Vulgate. It has been collated by Vercellone.

D (*Codex Vallicellianus* olim *Statianus*, Romae, Bibl. Vallicell. Orat. B. vi.), an Alcuinian MS. of the Bible also used by the Roman correctors, of the same date (or a little older) and character as C. Comp. Vallarsi, *Praef. ad Hieron.* ix. 15 (ed. Migne), and note ^b, p. 1703. Collated by Vercellone.

E (*Codex Ottobonianus* olim *Cervinianus*, Vatic. 60), a MS. of a portion of the O. T., imperfect at the beginning, and ending with Judg. xiii. 20. It is of the 8th century, and gives a text older than Alcuin's recension. It contains also important fragments of the Old Version of Genesis and Exodus published by Vercellone in his *Variae Lectiones*, i. Coll. by Vercellone.

F (Romae, Coll. SS. Blasii et Caroli), a MS. of the entire Latin Bible of the 10th century. It follows, in the main, the recension of Alcuin, with some variations, and contains the Roman Psalter. Coll. by Vercellone.

G (Romae, Coll. SS. Blasii et Caroli), a MS. of the 13th century, of the common late type. Coll. by Vercellone.

H, L, P, Q, are used by Vercellone to mark the readings given by Martianay, Hentenius, Castellanus, and R. Stephanus, in editions of the Vulgate.

I, Saec. xiii. Collated in part by C. J. Bauer, Eichhorn, *Repertorium*, xvii.

K (Monast. SS. Trin. Cavae), a most important MS. of the whole Bible, belonging to the monastery of La Cava, near Salerno. An exact copy of it was made for the Vatican Library (num. 8484) by the command of Leo XII., and this has been used by Vercellone for the books after Leviticus. For the three first books of the Pentateuch he had only an imperfect collation. The MS. belongs to the 6th or 7th century (Mai, *Nova Patrum Bibl.* i. 2, 7; *Spicil. Rom.* ix. Praef. xxiii.), and presents a peculiar text. Tischendorf has quoted it on 1 John v. 7, 8.

M, N, O, are Correctoria in the Vatican Library.

R, S (Romae, Coll. SS. Blasii et Caroli), Saec. xiv., of the common late type given in the editions of the 15th century. T. Saec. x., xi.; U. Saec. xii., two MSS. of the type of the recension of Alcuin.

V (Romae, Coll. SS. Blasii et Caroli), Saec. xiii., akin to F.

These MSS., of which Vercellone promises complete collations thus represent the three great types of the Hieronymian text: the original text in various stages of decadence (A, B, K); the recension of Alcuin (C, D, F, T, U, V); and the current later text (E, G, R, S). But though perhaps no MS. will ever surpass A in general purity, it is to be hoped that many more MSS., representing the ante-Alcuinian text, may yet be examined.

31. Martianay, in his edition of the *Divina Bibliotheca*, quotes, among others, the following MSS., but he uses them in such a way that it is impossible to determine throughout the reading of any particular MS.:—

Codex Memmianus, Saec. x.

Codex Carcassonensis, Saec. x.

CO^oNE
 ETNONIBIT
 QUISEXDUOBUSFECITAO
 •LUNTATEMPATRIS
 DICUNTNOU' PRIMUS
 DICITILLIS IHS
 AMENDICOUBIS
 QUIAPUBLICANIETME

2. Brit. Mus.—Addit. 5463

KPI, EO^oNE
 ETNONIBIT
 QUISEXDUOBUSFECITAO
 LUNTATEMPATRIS
 DICUNT, NOU'ISSIMUS

3. Stonyhurst—(St. Cuthbert's, St. John.)

NON HABEMUS REGEM
 NISI CAESAREM
 TUNC ERGO TRADIDITE IS ILLUM
 UT CRUCIFIGERETUR
 SUSCEPERUNT AUTEM IHS
 ET DUXERUNT
 ET BALILANS SIBI CRUCEM

4. Oxon. Bodl.—348. (Seld. 30.)

ETANT EUNUCHUS ECCEAQUA QUIS ANE
 PROHIBET BAPTIZARI DIXIT PHILIPPUS
 SICRERDIS EX TOTOCORDE LICET
 ETRESPONDENS AT CREDODIPILUS
 ESSE IHSO XPM ETIUS SIT STARE

Codex Sangermanensis (1), Saec. x.

Codex Regius, 3563-4.

Codex Sangermanensis (2), a fragment.

Codex Narbonensis. (*Index MSS. Codd.*)

Hieron. ix. pp. 135 ff. ed. Migne.)

To these, Vallarsi, in his revised edition, adds a collation, more or less complete, of other MSS. for the Pentateuch (Joshua, Judges)—of

Cod. Palatinus, 3.

Cod. Urbinas.

For the Books of Samuel and Kings.

Cod. Veronensis, a MS. of the very highest value. (Comp. Vallarsi, *Praef.* 19 ff. ed. Migne.)

For the Psalms.

Codd. Reg. Suec. ii. 1286.

Cod. Vatic. 154.

Cod. S. Crucis (or 104, *Cisterciensis*), (the most valuable).

For Daniel.

Cod. Palat. 3.

Cod. Vatic. 333.

For Esther, Tobit, and Judith.

Cod. Reg. Suec. 7.

Cod. Vatic. Palat. 24.

But of all these only special readings are known. Other MSS. which deserve examination are:—

1. *Brit. Mus. Addit.* 10, 546. Saec. ix. (Charlemagne's Bible) an Alcuinian copy. Comp. p. 1704, note ^m.

2. *Brit. Mus. Reg.* 1 E, vii. viii. Saec. ix. x. (Bentley's MS. R).^f

3. *Brit. Mus. Addit.* 24, 142. Saec. ix. x. (Important: apparently taken from a much older copy. The Psalter is Jerome's Version of the Hebrew. The Apocryphal books are placed after the Hagiographa, with the heading: *Incipit quartus ordo eorum librorum qui in Veteri Testamento extra Canonem Hebraeorum sunt*. The MS. begins Gen. xlix. 6.)

^f Bentley procured collations of upwards of sixty English and French Latin MSS. of the N. T., which are still preserved among his papers in Trin. Coll. Cambridge, R. 17, 5, and B. 17, 14. A list of these, as given by Bentley, is printed in Ellis's *Bentleyi Critica Sacra*, pp. xxxv. ff. I have identified and noticed the English MSS. below (comp. p. 1712). Of Bibles Bentley gives more or less complete collations of the N. T. from Paris. *Bibl. Reg.* 3562 (A.D. 876); 3561, Saec. ix.; 3563-4, Saec. ix.; 3564², Saec. ix., x. All appear to be Alcuinian.

Sir F. Madden has given a list of the chief MSS. of the Latin Bible (19 copies) in the *Gentleman's Magazine*, 1836, pp. 5-50 ff. This list, however, might be increased.

^g For all critical purposes the Latin texts of this edition are worthless. In one chapter taken at random (Mark viii.) there are *seventeen* errors in the text of the Lindisfarne MS., including the omission of one line with the corresponding gloss.

^h The accompanying Plates will give a good idea of the external character of some of the most ancient and precious Latin MSS. which the writer has examined. For permission to take the tracings, from which the facsimiles were made, his sincere thanks are due to the various institutions in whose charge the MSS. are placed.

Pl. I. fig. 1. *Brit. Mus. Harl.* 1775, Matt. xxi. 30, 31, *Et domine—et mē[retrices]*. This MS. (like figs. 2, 3) exhibits the arrangement of the text in lines (*versus*, *στίχοι*). The original reading *novissimus* has been changed by a late hand into *primus*. A characteristic error of sound will be noticed, *ibit* for *ivit* (*b* for *v*), which occurs also in fig. 2.

Fig. 2. *Brit. Mus. Add.* 5463. Matt. xxi. 30, 31, *ait—novissimus*. This magnificent MS. shows the beginning of contraction (*duob'*) and punctuation

4. *Brit. Mus. Harl.* 2805 to Psalms with some lacunae. Saec. ix.

5. *Brit. Mus. Egerton* 1046. Saec. viii. Prov. Eccles. Cant. Sap. Eccles. (with some lacunae) Good Vulgate.

6. *Lambeth*, 3, 4. Saec. xii.

32. ii. *MSS. of the N. T.*

A, B, C, D, F, &c., as enumerated before. To these must be added the *Codex Fuldensis* of the whole N. T., which, however, contains the Gospels in the form of a Harmony. The text of the MS. is of nearly equal value with that of A, and both seem to have been derived from the same source (Tischdf. *Prolegg. Cod. Am.* p. xxiii.). The MS. has been collated by Lachmann and Buttmann, and a complete edition is in preparation by E. Ranke.

Other Vulgate MSS. of parts of the N. T. have been examined more or less carefully. Of the Gospels, Tischendorf (*Proleg.* ccxlix. ff.) gives a list of a considerable number, which have been examined very imperfectly. Of the more important of these the best known are:—

For. Prag. (at Prague and Venice). Published by Bianchini, in part after Dobrowsky.

Harl. (*Brit. Mus. Harl.* 1775). Saec. vii. Coll. in part by Griesbach (*Symb. Crit.* i. 305 ff.).

Per. Fragments of St. Luke, edited by Bianchini. *Brit. Mus. Cotton.* Nero D, iv. Saec. viii. (Bentl. Y). The Lindisfarne (St. Cuthbert) Gospels with interlinear Northumbrian gloss. Ed. by Stevenson, for *Surtees Society* (St. Matt.; St. Mark). The Northumbrian gloss by Bouterwek, 1857. Stevenson has added a collation of the Latin of the Rushworth Gospels ^g (p. 1695, No. δ).

The following, among many others in the United Kingdom, deserve examination:^h—

(1.) Of the Gospels.

1. *Brit. Mus. Harl.* 1775. Saec. vii. (Griesbach's *Harl.* Bentley's Z). A new and

Fig. 3. Stonyhurst. John xix. 15-17, *non habemus—crucem*. This MS., unlike the former, seems to have been prepared for private use. It is written throughout with the greatest regularity and care. The large capitals probably indicate the beginnings of *membra* ($\kappa\omega\lambda\alpha$). The words are here separated.

Fig. 4. Oxf. Bodl. 3418. Acts viii. 36, 37, *et ait—stare*.

Pl. II. *Fig. 1. Cambr. Univ. Libr.* Kk. I. 24. John v. 4, *sanus fiebat—homo ibi*. This MS. offers a fine example of the semi-uncial "Irish" character, with the characteristic dotted capitals, which seems to have been used widely in the 8th century throughout Ireland and central and northern England. The text contains a most remarkable instance of the incorporation of a marginal gloss into the body of the book (*hoc in Grecis exemplaribus non habetur*), without any mark of separation by the original hand. This clause also offers a distinct proof of the revision of the copy from which the MS. was derived by Greek MSS. The contraction for *autem* is worthy of notice.

Fig. 2. Brit. Mus. Reg. 1 B. vii. Another type of "Saxon" writing.

Figs. 3, 4. Brit. Mus. Harl. 1023. Matt. xxvii. 49, with the addition *Alius autem—et sanguis*. *Ibid.* 1802. Matt. xxi. 30, 31, *et non iit—pupli[cani]*. Two characteristic specimens of later Irish writing. The contractions for *eum*, *autem*, *ejus*, *et*, *aqua*, in fig. 3, and for *et*, *non*, *enim*, *quia* in fig. 4, are noticeable.

Fig. 5. Hereford Gospels. John I. 3, 4, *factum est—compraehenderunt*. Probably a British type of the "Irish" character. The symbol for *est* (\div), and the *ch* for *h*, are to be observed.

- complete collation of this most precious MS. is greatly to be desired. It contains the *Prefaces*, *Canons*, and *Sections*, with blank places for the *Capitula*.¹ (Plate I., fig. 1.)
2. Brit. Mus. *Reg.* 1 E. vi. Saec. vii. (Bentley's P). A very important English MS., with many old readings, *Praef. Can.* (no Sections), *Cap. Mt.* xxviii. *Mc.* xii. (?) *Lc.* xx. *Joh.* xiv. Supposed to have formed part of the *Biblia Gregoriana*: Westwood, *Archaeological Journal*, xl. p. 292.
 3. Brit. Mus. *Reg.* 1 B. vii. Saec. viii. (Bentley's H). Another very important MS., preserving an old text.^k *Praef. Can.* (Sect.) *Cap. Mt.* lxxxvii. (sic). *Mc.* xlvi. *Lc.* xciv. *Joh.* xlv. (Plate II., fig. 2.)
 4. Brit. Mus. *Cotton.* Otho C V. Saec. viii. (Fragments of Matt. and Mark. Bentley's φ). Injured by fire: restored and mounted, 1848. The complement of 24.
 5. Brit. Mus. *Addit.* 5463. Saec. viii. (Bentley's F). A magnificent (Italian) uncial MS. with many old readings. *Praef. Can.* (Sect.) *Cap. Mt.* xxviii. *Mc.* xiii. *Lc.* xx. *Joh.* xiv. (Plate I., fig. 2.)
 6. Brit. Mus. *Harl.* 2788. Saec. viii., ix. (*Codex aureus* i. Bentley's M₂). Good Vulgate.
 7. Brit. Mus. *Harl.* 2797. Saec. viii. ix. (*Codex aureus* ii.) Vulgate of late type.
 8. Brit. Mus. *Reg.* 2 A. xx. Saec. viii. (*Lectioes quaedam ex Evangeliiis.*) Good Vulgate.
 9. Brit. Mus. *Harl.* 2790, cir. 850. A fine copy, with some old readings.
 10. Brit. Mus. *Harl.* 2795. Saec. ix. (In red letters.) Vulgate of late type.
 11. Brit. Mus. *Harl.* 2823. Saec. ix. Good Vulgate, with *versus*.
 12. Brit. Mus. *Harl.* 2826. Saec. ix. viii. (Bentley's H₂). Good Vulgate.
 13. Brit. Mus. *Reg.* 1 A, xviii. Saec. ix. x. (*Cod. Athelstani.* Bentley's O). Many old and peculiar readings.
 14. Brit. Mus. *Reg.* 1 D, iii. Saec. x. Like 13, but most carelessly written.

¹ The varying divisions into *capitula* probably indicate different families of MSS., and deserve attention, at least in important MSS. The terms *breviarium*, *capitula*, *breves*, appear to be used quite indiscriminately. One term is often given at the beginning and another at the end of the list. *Brit. Mus. Addit.* 9381 gives *tituli* (a division into smaller sections) as well as *capitula*.

^k This MS. contains the addition, after *Matt.* xx. 28, in the following form:—

Vos autem quaeritis de modico
 crescere et de maximo minui
 Cum autem introieretis
 ad coenam vocati
 Nolite recumbere in superioribus locis [veniat
 Ne forte dignior te super
 et accedens is qui te invitavit
 Dicat tibi adhuc inferius
 accede et confundaris
 Si autem recubueris in inferiori loco et venerit humilior te
 Dicet tibi qui te invitavit
 Accede adhuc superius et
 erit tibi hoc utilius.

15. Brit. Mus. *Addit.* 11,848 Saec. ix. Carefully written and corrected. Closely resembling 20.
16. Brit. Mus. *Addit.* 11,849. Saec. ix. Vulgate of late type.
17. Brit. Mus. *Egerton*, 768. Saec. ix. (St. Luke and St. John.) Some important readings.
18. Brit. Mus. *Egerton*, 873. Saec. ix. Good Vulgate. *Praef. Can.* (Sect.) *Cap. Mt.* xxviii. *Mc.* xiii. *Lc.* xxi. *Joh.* xiv.
19. Brit. Mus. *Addit.* 9381. Saec. ix. From St. Petroc's, Bodmin. Some peculiar readings. *Praef. Can.* (Sect.) *Tituli. Mt.* cclii. (*Cap. lxxxiv. versus* 11000.). *Mc.* clxxxvi. *Lc.* cccxl. *Joh.* ccxxvi.
20. Brit. Mus. *Cotton.* Tib. A, ii. Saec. x. (The Coronation Book. Bentley's E). Many old readings in common with 1, 3, 5, but without great interpolations.^m
21. Brit. Mus. *Reg.* 1 D. ix. Saec. xi. (Canute's Book. Bentley's A). Good Vulgate.
22. Cambridge *Univ. Libr.* Ll. i. 10. (*Passio et Resurrectio ex iv. Evv.*). Saec. viii. Written (apparently) for Ethelwald, Bp. of Lindisfarne.
23. Cambridge, *C. C. C. Libr.* cclxxxvi. (iv. Gospels, with Eusebian Canons.) Saec. vi., vii. Supposed by many to have been sent by Gregory the Great to Augustine. *Cap. Mt.* xxviii. *Mark* xiii. *Luke* xx. *John* xiv. Vulgate with many old readings. It has been corrected by a very pure Vulgate text. Described and some readings given by J. Goodwin, *Publ. of Cambr. Antiquarian Society*, 1847.ⁿ
24. Cambridge, *C. C. C. Libr.* cxcvii. (Fragments of St. John and St. Luke, extending over John i. 1-x. 29, and Luke iv. 5-xxiii. 26, with Eusebian Canons.) Saec. viii. The fragments of St. John were published by J. Goodwin, *l. c.* A curiously mixed text, forming a connecting link between the "Irish" text and the Vulgate, but without any great interpolations. See No. 4. *Comp.* p. 1694.
25. Cambridge, *Trin. Coll.* B. 10, 4, iv.

The same addition is given in the first hand of Oxford *Bodl.* 857, and in the second hand of B.M. *Add.* 24,142, with the following variations: *introieritis, advenerit, invitavit.* In B.M. *Reg.* A. xviii. the variations are much more considerable: *pusillo, majori minores esse, introeuntes autem et rogati ad coenam, locis eminentioribus, clarior, om. is, ad coenam vocavit, deorsum, in l. inf. rec., supervenerit, ad coenam vocavit, adhuc sursum accede, om. hoc.*

^m Bentley has also given a collation of another Cottonian MS. (Otho, B. ix.) very similar to this, which almost perished in the fire in 1731. Mr. E. A. Bond, Deputy Keeper of the MSS., to whose kindness the writer is greatly indebted for important help in examining the magnificent collection of Latin MSS. in the British Museum, has shown him fragments of a few leaves of this MS. which were recovered from the wreck of the fire. By a singular error Bentley calls this MS., and not Tib. A. ii., the *Coronation Book*. *Comp. Smith, Cotton. Cat.*

ⁿ A complete edition of this text, with collations of London *Brit. Mus. Harl.* 1775. *Reg.* 1 E. vi., 1 B. vii.; *Addit.* 5463; Oxford, *Bodl.* 857, is, I believe, in preparation by the Rev. G. Williams, Fellow of King's College Cambridge.

sacrus fiebat aucta uigione a uocum que
 clare uocabatur hoc in igne excelsa uoluit
 non hoc uocabatur. Erant autem homines ibi

1. Brit. Mus. - Reg. I. B. vii

opit similiten hulle ne
 spondensat ead nē d n i u n t.
 quis ex uob: facit uoluntā
 tem p dous dicunt non uis
 / mult

2. Brit. Mus. - Harl. 1039.

de helia libane ē. Alia uocatur lancea
 pupusie lazo 7 ex ne dē 7 7 angust. 7 7 7 7

4. Brit. Mus. - Harl. 1807.

in me. Quis ex uob: facit uoluntate p apu sy
 Omne ei. p m u s: u e h i t d m d i a u o b y p i p t a

4. Hereford Gospels.

quod factum ē in ipso uita est quia
 erat lux hominum & lux in tenebris lux
 & tenebris eam non comprehenderunt:

- Gospels, Saec. ix. (*Cap.*) Matt. xxvii. Mc. xiii. Lc. xxi. Joh. xiv. Good Vulgate, with some old readings. (Bentley's T.)
26. Cambridge, *Coll. D. Joh. C.* 23. The Bendish Gospels, Saec. ix. Good Vulgate, very carefully written.
27. Oxford, *Bodl.* 857 (D. 2, 14). Saec. vii. Begins, Matt. iv. 14, ut adim.—ends John xxi. 15, with a lacuna from Matt. viii. 29, dicentes — ix. 18, defuncta est. *Sec.* Praef. (*Cap.*) Mc. xiii. Lc. xx. Joh. xiv. Closely akin to 23.^o
28. Durham, "Codex Evangeliorum plus mille annorum, litteris capitalibus ex Bibliotheca Dunelmensi." (Bentley's K.) Ends John i. 27.
29. Durham, "Codex Evangeliorum plus mille annorum, sed imperfectus." (Bentley's ξ.) Begins Mark i. 12. Two very important MSS. Both have many old readings in common with 1, 3, 4, 5.
30. Stonyhurst, *St. Cuthbert's St. John*, found in 1105 at the head of St. Cuthbert when his tomb was opened. Saec. vii. Very pure Vulgate, agreeing with *Cod. Am.* in many very remarkable readings: *e. g.* i. 15, *dixi vobis*; ii. 4, *tibi et mihi*; iv. 10, *respondit Jesus dixit*; iv. 16, *et veni, om. huc, &c.*^p (Plate I. fig. 3.)

(2.) Of the Acts and Epistles and Apoc. :—

1. Oxford, *Bodl. Seld.* 30 (Acts). See §12, (2). (Plate I. fig. 4.)
2. Oxford, *Bodl. Laud.* E, 67 (Epp. Paul). See §12, (2).
3. Brit. Mus., *Harl.* 1772. (Epp. Paul. et Cath. (except 3 Jo. Jud.) Apoc.). Saec. viii. Griesbach, *Symb. Crit.* i. 326 ff., a most important MS. (Bentley's M.) See §12, (2).
4. Brit. Mus. *Harl.* 7551. (Fragm. of Cath. Epp. and St. Luke.) Saec. viii. (Bentley's α, γ.)

^o By a very strange mistake Tischendorf describes this MS. as "multorum Ni. 7. fragmentorum."

^p It may be interesting to give a rough classification of these MSS., all of which the writer has examined with more or less care. Many others of later date may be of equal value; and there are several early copies in private collections (as at Middlehill) and at Dublin (*e. g.* the (Vulgate) *Book of St. Columba*, Saec. vii. Westwood, *Pal. Sacra*) which he has been obliged to leave unexamined.

Group i. *Vulgate text approaching closely on the whole to the Cod. Amiat.*: 6, 8, 11, 12, 18, 21, 22, 25, 26, 30.

Group ii. *Vulgate text of a later type*: 7, 10, 16.

Group iii. *A Vulgate text mainly with old readings*: 1, 9, 17, 19, 23, 27.

Group iv. *A mixed text, in which the old readings are numerous and important*: 2, 3, 4 (24), 5, 13, 14, 15, 20, 28, 29.

A more complete collation might modify this arrangement, but it is (I believe) approximately true.

^q This MS. contains the Epistle to the Laodiceans after that to the Hebrews, and also the addition 1 Joh. v. 7, in the following form: *Quia tres sunt qui testimonium dant sps, et aqua, et sanguis, et tres unum sunt. Sicut in celo tres sunt, pater verbum et sps, et tres unum sunt.* It is remarkable that the two other oldest authorities in support of this addition, also support the Epistle to the Laodiceans—the MS. of La Cava, and the *Speculum* published by Mal.

^r A fragment containing prefatory excerpts to a copy

5. Brit. Mus. *Addit.* 11,852. Saec. ix. Epp. Paul. Act. Cath. Epp. Apoc. Good Vulgate.^q
6. Brit. Mus. *Reg.* 1 A. xvi. Saec. xi. Good Vulgate.
7. Cambridge, *Coll. SS. Trin.* B. 10, 5. Saec. ix. (Collated by F. J. A. Hort. Bentley's S.) In Saxon letters: akin to 2.^r
8. Cambridge, *Coll. SS. Trin. Cod. Aug.* (F₂) Published by F. H. Scrivener, 1859.^s
9. "Codex ecclesiae Lincolnensis 800 annorum." (Bentley's ξ, Act. Apoc.)
10. Brit. Mus. *Reg.* 2 F. i. Saec. xii. (Bentley's B.) Paul. Epp. xiv. cum commentario. Many old readings.

A Lectionary quoted by Sabatier (Saec. viii.), and the Mozarabic Liturgy, are also of great critical value.

In addition to MSS. of the Vulgate, the Anglo-Saxon Version which was made from it is an important help towards the criticism of the text. Of this the *Heptateuch* and *Job* were published by E. Thwaites, Oxf. 1699; the (Latin-Saxon) *Psalter*, by J. Spelman, 1640, and B. Thorpe, 1835; the *Gospels*, by Archbp. Parker, 1571, T. Marshall, 1665, and more satisfactorily by B. Thorpe, 1842, and *St. Matt.* by J. M. Kemble (and C. Hardwick) with two Anglo-Saxon texts, formed on a collation of five MSS., and the Lindisfarne text and gloss. Comp. also the Frankish Version of the Harmony of Ammonius, ed. Schmeller, 1841.

VII. THE CRITICAL VALUE OF THE LATIN VERSIONS.—33. The Latin Version, in its various forms, contributes, as has been already seen, more or less important materials for the criticism of the original texts of the Old and New Testaments, and of the Common and Hexaplaric texts of the LXX. The bearing of the Vulgate on the LXX. will not be noticed here, as the points involved in the inquiry more properly belong to the history of the LXX. Little, again, need be said on the value of the

of St. Paul's epistles written in a hand closely resembling this is found B.M. *Cotton.* Vitell. C. viii.

^s From an examination of Bentley's unpublished collations, it may be well to add that of the eighteen French MSS., which he caused to be compared with the Clementine text (*Lutet. Paris.* apud *Claudium Sommium*, MDCXXXVIII. See Trin. Coll. Camb. B. 17, 5), the following are the most important, and would repay a complete collation. The writer has retained Bentley's notation: some of the MSS. may probably have passed into other collections.

α. *S. Germani a Pratis* Saec. viii. Gold uncials on purple vellum. Matt. vi. 2, *ut*—to end. Mark ix. 47, *eice*—xi. 13, *vidisset.* xii. 23, *resurrexerint*—to end. Good Vulgate.

μ. *S. Germani a Pratis.* (g' of Tischdf. &c.) A very important MS., containing part of O.T., the whole of N.T. (of Gallican text?), and "*tria folia Pastoris.*" Existing collations are very incomplete. At the end of the Epistle to the Hebrews, which precedes the Shepherd, the MS. has (according to Bentley) the following note: *Explicit ad Hebraeos Lege cum pace. Bibliotheca Hieronimi Presbyteri Bethleem secundum Graecum ex emendatis. mie exemplaribus conlatus* (sic).

ν. *S. Germani a Pratis*, 1, 2, A.D. 809.

ο. *Bibl. Regiae*, Paris. 3706. 4 Gosp. Saec. ix. Many old readings.

π. *Bibl. Regiae*, Paris. 3706 (2.3). 4 Gosp., with some lacunae. Saec. viii. Many old readings.

ρ. *S. Martini Turonensis.* Lit. aureis. Saec. viii. An important MS. (Gallican t). Comp. p. 1695, note ^s

translation of Jerome for the textual criticism of the O. T. As a whole his work is a remarkable monument of the substantial identity of the Hebrew text of the 4th century with the present Masoretic text; and the want of trustworthy materials for the exact determination of the Latin text itself, has made all detailed investigation of his readings impossible or unsatisfactory. The passages which were quoted in the premature controversies of the 16th and 17th centuries, to prove the corruption of the Hebrew or Latin text, are commonly of little importance as far as the text is concerned. It will be enough to notice those only which are quoted by Whitaker, the worthy antagonist of Bellarmine (*Disputation on Scripture*, pp. 163, ff., ed. Park. Soc.).

Gen. i. 30, *om.* all green herbs (in Vet. L.);
iii. 15, *Ipsa* conteret caput tuum. There seems good reason to believe that the original reading was *ipse*. Comp. Vercellone, *ad loc.* See also Gen. iv. 16.

iii. 17, in opere tuo. בעבורך for בעבורך.

iv. 16, *om.* Nod, which is specially noticed in Jerome's *Quaest. Hebr.*

vi. 6, *add.* et praecavens in futurum. The words are a gloss, and not a part of the Vulgate text.

viii. 4, *vicesimo septimo*, for *septimo decimo*. So LXX.

Id. 7, *egrediebatur et non revertebatur*. The *non* is wanting in the best MSS. of the Vulgate, and has been introduced from the LXX.

xi. 13, *trecentis* tribus, for *quadringentis* tribus. So LXX.

ix. 1, *fundetur sanguis illius*. *Om.* "by man."

xxxvii. 2. *Sedecim* for *septemdecim*. Probably a transcriptional error.

xxxix. 6, *om.* "Wherefore he left—Joseph."

xl. 5, *om.* "The butler—prison."

xlix. 10. Comp. Vercellone *ad loc.*

33, *om.*

In xxiv. 6, xxvii. 5, xxxiv. 29, the variation is probably in the rendering only. The remaining passages, ii. 8; iii. 6; iv. 6, 13, 26; vi. 3; xiv. 3; xvii. 16; xix. 18; xxi. 9; xxiv. 22; xxv. 34; xxvii. 33; xxxi. 32; xxxviii. 5, 23; xlix. 22, contain differences of interpretation; and in xxxvi. 24, xli. 45, the Vulgate appears to have preserved important traditional renderings.

34. The examples which have been given show the comparatively narrow limits within which the Vulgate can be used for the criticism of the Hebrew text. The Version was made at a time when the present revision was already established; and the freedom which Jerome allowed himself in rendering the sense of the original, often leaves it doubtful whether in reality a various reading is represented by the peculiar form which he gives to a particular passage. In the N. T. the case is far different. In this the critical evidence of the Latin is separable into two distinct elements, the evidence of the Old Latin and that of the Hieronymian revision. The latter, where it differs from the former, represents the received Greek text of the 4th century, and so far claims a respect (speaking roughly) equal to that due to a first-class Greek MS.; and it may be fairly concluded, that any reading opposed to the combined testimony of the oldest Greek MSS. and the true Vulgate text, either arose later than the 4th century, or was previously confined within a very narrow range. The corrections of Jerome do not carry us back beyond the age of existing Greek MSS., but, at the same time, they supplement the

original testimony of MSS. by an independent witness. The substance of the Vulgate, and the copies of the Old Latin, have a more venerable authority. The origin of the Latin Version dates, as has been seen, from the earliest age of the Christian Church. The translation, as a whole, was practically fixed and current more than a century before the transcription of the oldest Greek MS. Thus it is a witness to a text more ancient, and, therefore, *caeteris paribus*, more valuable, than is represented by any other authority, unless the Peshito in its present form be excepted. This primitive text was not, as far as can be ascertained, free from serious corruptions (at least in the synoptic Gospels) from the first, and was variously corrupted afterwards. But the corruptions proceeded in a different direction and by a different law from those of Greek MSS., and, consequently, the two authorities mutually correct each other. What is the nature of these corruptions, and what the character and value of Jerome's revision, and of the Old Latin, will be seen from some examples to be given in detail.

35. Before giving these, however, one preliminary remark must be made. In estimating the critical value of Jerome's labours, it is necessary to draw a distinction between his different works. His mode of proceeding was by no means uniform; and the importance of his judgment varies with the object at which he aimed. The three versions of the Psalter represent completely the three different methods which he followed. At first he was contented with a popular revision of the current text (the *Roman Psalter*); then he instituted an accurate comparison between the current text and the original (the *Gallican Psalter*); and in the next place he translated independently, giving a direct version of the original (the *Hebrew Psalter*). These three methods follow one another in chronological order, and answer to the wider views which Jerome gradually gained of the functions of a biblical scholar. The revision of the N. T. belongs unfortunately to the first period. When it was made, Jerome was as yet unused to the task, and he was anxious not to arouse popular prejudice. His aim was little more than to remove obvious interpolations and blunders; and in doing this he likewise introduced some changes of expression which softened the roughness of the old version, and some which seemed to be required for the true expression of the sense (*e. g.* Matt. vi. 11, *super-substantialem* for *quotidianum*). But while he accomplished much, he failed to carry out even this limited purpose with thorough completeness. A rendering which he commonly altered was still suffered to remain in some places without any obvious reason (*e. g.* *μυστήριον*, *δοξάζω*, *ἀφανίζω*); and the textual emendations which he introduced (apart from the removal of glosses) seem to have been made after only a partial examination of Greek copies, and those probably few in number. The result was such as might have been expected. The greater corruptions of the Old Latin, whether by addition or omission, are generally corrected in the Vulgate. Sometimes, also, Jerome gives the true reading in details which had been lost in the Old Latin: Matt. i. 25, *cognoscebat*; ii. 23, *prophetas*; v. 22, *om.* *εἰκῆ*; ix. 15, *lugere*; John iii. 8; Luke ii. 33, *ὁ πατήρ*; iv. 12; but not rarely he leaves a false reading uncorrected (Matt. ix. 28, *vobis*; x. 42), or adopts a false reading where the true one was also current; Matt

at Matt. iii. 15; xx. 28; Luke iii. 22 (compare also Luke i. 46; xii. 38); but more frequently they are derived from parallel passages, either by direct transference of the words of another evangelist, or by the reproduction of the substance of them. These interpolations are frequent in the synoptic Gospels; Matt. iii. 3; Mark xvi. 4; Luke i. 29, vi. 10; ix. 43, 50, 54; xi. 2; and occur also in St. John vi. 56, &c. But in St. John the Old Latin more commonly errs by defect than by excess. Thus it omits clauses certainly or probably genuine: iii. 31; iv. 9; v. 36; vi. 23; viii. 58, &c. Sometimes, again, the renderings of the Greek text are free: Luke i. 29; ii. 15; vi. 21. Such variations, however, are rarely likely to mislead. Otherwise the Old Latin text of the Gospels is of the highest value. There are cases where some Latin MSS. combine with one or two other of the most ancient witnesses to support a reading which has been obliterated in the mass of authorities: Luke vi. 1; Mark xvi. 9 ff.; v. 3; and not unfrequently (comp. § 35) it preserves the true text which is lost in the Vulgate: Luke xiii. 19; xiv. 5; xv. 28.

36. Jerome's revision of the Gospels was far more complete than that of the remaining parts of the N. T. It is, indeed, impossible, except in the Gospels, to determine any substantial difference in the Greek texts which are represented by the Old and Hieronymian Versions. Elsewhere the differences, as far as they can be satisfactorily established, are differences of expression and not of text; and there is no sufficient reason to believe that the readings which exist in the best Vulgate MSS., when they are at variance with other Latin authorities, rest upon the deliberate judgment of Jerome. On the contrary, his Commentaries show that he used copies differing widely from the recension which passes under his name, and even expressly condemned as faulty in text or rendering many passages which are undoubtedly part of the Vulgate. Thus in his Commentary on the Galatians he condemns the additions, iii. 1, *veritati non obedire*; v. 21, *homicidia*; and the translations, i. 16, *non acquievi carni et sanguini* (for *non contuli cum carne et sanguine*); v. 9, *modicum fermentum totam massam corrumpit* (for *modicum fermentum totam conspersione fermentat*); v. 11, *evacuatum est* (for *cessavit*); vi. 3, *seipsum* (seipse) *seducit* (for *mentem suam decipit*). And in the text of the Epistle which he gives there are upwards of fifty readings which differ from the best Vulgate text, of which about ten are improvements (iv. 21; v. 13, 23; vi. 13, 15, 16, &c.), as many more inferior readings (iv. 17, 26, 30, &c.), and the remainder differences of expression: *malo* for *nequam*, *recto pede incedunt* for *recte ambulant*, *rursum* for *iterum*. The same differences are found in his Commentaries on the other Epistles: *ad Ephes.* i. 6; iii. 14; iv. 19; v. 22, 31: *ad Tit.* iii. 15. From this it will be evident that the Vulgate text of the Acts and the Epistles does not represent the critical opinion of Jerome, even in the restricted sense in which this is true of the text of the Gospels. But still there are some readings which may with probability be referred to his revision: Acts xiii. 18, *mores eorum sustinuit* for *nutriit* (*aluit*) *eos*. Rom. xii. 11, *Domino* for *tempori*. Eph. iv. 19, *illuminabit te Christus* for *continget Christum*. Gal. ii. 5, *neque ad horam cessimus* for *ad horam cessimus*. 1 Tim. v. 19, add. *nisi sub duobus aut tribus testibus*.

37. The chief corruptions of the Old Latin consist in the introduction of glosses. These, like the corresponding additions in the *Codex Bezae* (D₁), are sometimes indications of the venerable antiquity of the source from which it was derived, and seem to carry us back to the time when the evangelic tradition had not yet been wholly superseded by the written Gospels. Such are the interpolations

at Matt. iii. 15; xx. 28; Luke iii. 22 (compare also Luke i. 46; xii. 38); but more frequently they are derived from parallel passages, either by direct transference of the words of another evangelist, or by the reproduction of the substance of them. These interpolations are frequent in the synoptic Gospels; Matt. iii. 3; Mark xvi. 4; Luke i. 29, vi. 10; ix. 43, 50, 54; xi. 2; and occur also in St. John vi. 56, &c. But in St. John the Old Latin more commonly errs by defect than by excess. Thus it omits clauses certainly or probably genuine: iii. 31; iv. 9; v. 36; vi. 23; viii. 58, &c. Sometimes, again, the renderings of the Greek text are free: Luke i. 29; ii. 15; vi. 21. Such variations, however, are rarely likely to mislead. Otherwise the Old Latin text of the Gospels is of the highest value. There are cases where some Latin MSS. combine with one or two other of the most ancient witnesses to support a reading which has been obliterated in the mass of authorities: Luke vi. 1; Mark xvi. 9 ff.; v. 3; and not unfrequently (comp. § 35) it preserves the true text which is lost in the Vulgate: Luke xiii. 19; xiv. 5; xv. 28.

38. But the places where the Old Latin and the Vulgate have separately preserved the true reading are rare, when compared with those in which they combine with other ancient witnesses against the great mass of authorities. Every chapter of the Gospels will furnish instances of this agreement, which is often the more striking because it exists only in the original text of the Vulgate, while the later copies have been corrupted in the same way as the later Greek MSS.: Mark ii. 16; iii. 25 (?); viii. 13, &c.; Rom. vi. 8; xvi. 24, &c. In the first few chapters of St. Matthew, the following may be noticed: i. 18 (*bis*); ii. 18; iii. 10; v. 4, 5, 11, 30, 44, 47; vi. 5, 13; vii. 10, 14, 29; viii. 32 (x. 8), &c. It is useless to multiply examples which occur equally in every part of the N. T.: Luke ii. 14, 40; iv. 2, &c.; John i. 52; iv. 42, 51; v. 16; viii. 59; xiv. 17, &c.; Acts ii. 30, 31, 37, &c.; 1 Cor. i. 1, 15, 22, 27, &c. On the other hand, there are passages (comp. § 35) in which the Latin authorities combine in giving a false reading: Matt. vi. 15; vii. 10; viii. 28 (?), &c.; Luke iv. 17; xiii. 23, 27, 31, &c.; Acts iii. 20, &c.; 1 Tim. iii. 16, &c. But these are comparatively few, and commonly marked by the absence of all Eastern corroborative evidence. It may be impossible to lay down definite laws for the separation of readings which are due to free rendering, or carelessness, or glosses, but in practice there is little difficulty in distinguishing the variations which are due to the idiosyncrasy (so to speak) of the Version from those which contain real traces of the original text. And when every allowance has been made for the rudeness of the original Latin, and the haste of Jerome's revision, it can scarcely be denied that the Vulgate is not only the most venerable but also the most precious monument of Latin Christianity. For ten centuries it preserved in Western Europe a text of Holy Scripture far purer than that which was current in the Byzantine Church; and at the revival of Greek learning, guided the way towards a revision of the late Greek text, in which the best biblical critics have followed the steps of Bentley, with ever-deepening conviction of the supreme importance of the coincidence of the earliest Greek and Latin authorities.

39. Of the interpretative value of the Vulgate little need be said. There can be no doubt that in dealing with the N. T., at least, we are now

in possession of means infinitely more varied and better suited to the right elucidation of the text than could have been enjoyed by the original African translators. It is a false humility to rate as nothing the inheritance of ages. If the investigation of the laws of language, the clear perception of principles of grammar, the accurate investigation of words, the minute comparison of ancient texts, the wide study of antiquity, the long lessons of experience, have contributed nothing towards a fuller understanding of Holy Scripture, all trust in Divine Providence is gone. If we are not in this respect far in advance of the simple peasant or half-trained scholar of North Africa, or even of the laborious student of Bethlehem, we have proved false to their example, and dishonour them by our indolence. It would be a thankless task to quote instances where the Latin Version renders the Greek incorrectly. Such faults arise most commonly from a servile adherence to the exact words of the original, and thus that which is an error in rendering proves a fresh evidence of the scrupulous care with which the translator generally followed the text before him. But while the interpreter of the N. T. will be fully justified in setting aside without scruple the authority of early versions, there are sometimes ambiguous passages in which a version may preserve the traditional sense (John i. 3, 9, viii. 25, &c.) or indicate an early difference of translation; and then its evidence may be of the highest value. But even here the judgment must be free. Versions supply authority for the text, and opinion only for the rendering.

VIII. THE LANGUAGE OF THE LATIN VERSIONS. — 40. The characteristics of Christian Latinity have been most unaccountably neglected by lexicographers and grammarians. It is, indeed, only lately that the full importance of provincial dialects in the history of languages has been fully recognised, and it may be hoped that the writings of Tertullian, Arnobius, and the African Fathers generally, will now at length receive the attention which they justly claim. But it is necessary to go back one step further, and to seek in the remains of the Old Latin Bible the earliest and the purest traces of the popular idioms of African Latin. It is easy to trace in the patristic writings the powerful influence of this venerable Version; and, on the other hand, the Version itself exhibits numerous peculiarities which were evidently borrowed from the current dialect. Generally it is necessary to distinguish two distinct elements both in the Latin Version and in subsequent writings: (1) Provincialisms and (2) Graecisms. The former are chiefly of interest as illustrating the history of the Latin language; the latter as marking, in some degree, its power of expansion. Only a few remarks on each of these heads, which may help to guide inquiry, can be offered here; but the careful reading of some chapters of the Old Version (e. g. Psalms, Eccclus., Wisdom, in the modern Vulgate) will supply numerous illustrations.*

(1.) *Provincialisms*.—41. One of the most interesting facts in regard to the language of the Latin Version is the reappearance in it of early forms which are found in Plautus or noted as

* Card. Wiseman (*Two Letters, &c.*, republished in *Essays*, i. pp. 46-64) has examined this subject in some detail, and the writer has fully availed himself of his examples, in addition to those which he had himself col-

archaisms by grammarians. These establish in a signal manner the vitality of the popular as distinguished from the literary idiom, and, from the great scarcity of memorials of the Italian dialects, possess a peculiar value. Examples of *words, forms, and constructions* will show the extent to which this phenomenon prevails.

(a) *Words*:

Stultiloquium, multiloquium, vaniloquus (Plautus); *stabilimentum* (id.); *datus* (subst. id.); *condignus* (id.); *aratiuncula* (id.); *versipellis* (id.); *saturitas* (id.); *stacte* (id.); *cordatus* (Ennius); *custoditio* (Festus); *decipula, dejero* (Plautus); *exentero* (id.); *sciurus* (Pac.) *mino* (to *drive*, Festus).

(β) *Forms*:

Deponents as Passive: *consolor, hortor, promereor* (Heb. xiii. 16); *ministror*.

Irregular inflections: *partibor absconsus* conversely, *exies, &c.*

tapetia (Plautus), *haec* (fem. pl.)

Unusual forms: *pascua* (fem.); *murmur* (masc.); *sal* (neut.); *retia* (sing.); *certor, odio, cornum, placor* (subst.), *dulcor*.

(γ) *Constructions*:

Emigro with *acc.* (Ps. lxi. 7, *emigrabit te de tabernaculo*); *dominor* with *gen.*; *noceo* with *acc.*; *sui, suus* for *ejus, &c.*; *non* for *ne* prohibitive; *capit* *impers.*

42. In addition to these there are many other peculiarities which evidently belong to the African (or common) dialect, and not merely to the Christian form of it. Such are the words *minorare, minoratio, improprium, framea* (a sword), *ablactatio, annualis, alleviare, pectusculum, antemurale, panifica, paratura, tortura, tribulare* (met.), *tribulatio, valefacere, veredarius, viare, victualia, virectum* (viretum), *vitulamen, volatilia* (subst.), *quaternio, reclinatorium, scrutinium, sponsare, stratoria* (subst.), *sufferentia, sufficientia, superabundantia, sustinentia, cartallus, cassidile, collactaneus, condulcare, genimen, grossitudo, refectio* (κατάλυμα), *extermium, defunctio* (decease), *substantia* (abs.), *incolatus*.

New verbs are formed from adjectives: *pessimare, proximare, approximare, assiduare, pigritari, salvare* (*salvator, salvatio*), *obviare, jucundare*, and especially a large class in *-fico*: *mortifico, vivifico, sanctifico, glorifico, clarifico, beatifico, castifico, gratifico, fructifico*.

Other verbs worthy of notice are: *appropriare, appretiare, tenebrescere, indulcare, implanare* (plānus), *manicare*.

In this class may be reckoned also many

(1) New substantives derived from adjectives: *possibilitas, praeclaritas, paternitas, praescientia, religiositas, nativitas, supervacuitas, magnalia*.

or verbs: *requietio, respectio, creatura, subitatio, extollentia*.

(2) New verbals: *accensibilis, acceptabilis, docibilis, productilis, passibilis, receptibilis, reprehensibilis, suadibilis, subjectibilis, arreptitius*; and participial forms: *pudoratus, angustiatus, timoratus, sensatus, disciplinatus, magnatus, linguatus*.

lected. The *Thesaurus* of Faber (ed. 1749) is the most complete for Ecclesiastical Latin; and Dutripon's Concordance is, as far as the writer has observed, complete for the authorised Clementine text.

(3) New adjectives: *animaequus, temporaneus, unigenitus, querulosus*; and adverbs, *terribiliter, unanimitate, spiritualiter, cognoscibiliter, fiducialiter*.
 The series of negative compounds is peculiarly worthy of notice: *immemoratio, increditio, inconsumatio; inhonorare; inauxiliatus, indeficiens, inconfusibilis, importabilis*.

Among the characteristics of the late stage of a language must be reckoned the excessive frequency of compounds, especially formed with the prepositions. These are peculiarly abundant in the Latin Version, but in many cases it is difficult to determine whether they are not direct translations of the late LXX. forms, and not independent forms: e. g. *addecimare, adinvenire -ntio, adincrescere, pereffluere, permundare, propurgare, superexaltare, superinvalescere, supererogare, reinvitare, rememoratio, repropitiari, subinferre*. Of these many are the direct representatives of Greek words: *superadulta* (1 Cor. vii. 36), *superseminare* (Matt. xiii. 25), *comparticipes, concaptivus, complantatus, &c.* (*supersubstantialis*, Matt. vi. 11); and others are formed to express distinct ideas: *subcinericus, subnervare, &c.*^u

(2) *Graecisms.*—43. The "simplicity" of the Old Version necessarily led to the introduction of very numerous Septuagintal or N. T. forms, many of which have now passed into common use. In this respect it would be easy to point out the difference which exists between Jerome's own work and the original translation, or his revision of it. Examples of Greek words are: *zelare, perizoma, python, pythonissa, proselytus, prophetes -tissa -tizare -tare, poderis, pompatrice, thesaurizare, anathematizare, agonizare, agonia, aromatizare, angelus -icus, peribolus, pisticus, probatica, papyrio, pastophoria, telonium, eucharis, acharis, romphaea, beavium, dithalassus, doma (thronus), thymiatorium, tristega, scandalum, sitarcia, blasphemare, &c.*, besides the purely technical terms: *patriarcha, Parasceve, Pascha, Paracletus*. Other words based on the Greek are: *aporior, angario, apostatare, apostolatus, acedior (ἀκηδία)*.

Some close renderings are interesting: *amodo (ἀπὸ τούτου), propitiatorium (ἰλαστήριον), inidipsum (ἐπὶ τὸ αὐτὸ), rationale (λογεῖον, Ex. xviii. 15, &c.), scenofactorius (Acts xviii. 3), seminiverbius (Acts xvii. 18), subintroductus (Gal. ii. 4), supercertari (Jude 3), civilitas (Acts xxii. 28), intentator malorum (Jam. i. 13). To this head also must be referred such constructions as *zelare with accus.* (*ζηλοῦν τινα*); *facere with inf.* (*ποιεῖν . . . γενέσθαι*); *potestas with inf.* (*ἐξουσία ἀφιέναι*); the use of the *inf.* to express an end (Acts vii. 43, *ἐποίησατε προσκυνεῖν*) or a result (Luke i. 25, *ἐπεὶ δὲν ἀφελεῖν, respexit auferre*); the introduction of *quia* for *ὅτι* in the sense of *that* (Luke i. 58, *audierunt . . . quia*), or for *ὅτι recitativum* (Matt. vii. 23, *Confitebor illis quia . . .*); the dat. with *assequi* (Luke i. 3, *παρακολουθεῖν V. L.*); the use of the *gen.* with the comparative (John i. 50, *majora horum*); and such Hebraisms as *vir mortis* (1 K. ii. 26). Comp. § 6.*

Generally it may be observed that the Vulgate Latin bears traces of a threefold influence derived

from the original text; and the modifications of form which are capable of being carried back to this source, occur yet more largely in modern languages, whether in this case they are to be referred to the plastic power of the Vulgate on the popular dialect, or, as is more likely, we must suppose that the Vulgate has preserved a distinct record of powers which were widely working in the times of the Empire on the common Latin. These are (1) an extension of the use of prepositions for simple cases, e. g. in the renderings of *ἐν*, Col. iii. 17, *facere in verbo, &c.*; (2) an assimilation of pronouns to the meaning of the Greek article, e. g. 1 John i. 2, *ipsa vita*; Luke xxiv. 9, *illis undecim, &c.*; and (3) a constant employment of the definitive and epithetic genitive, where classical usage would have required an adjective, e. g. Col. i. 13, *filius caritatis suae*; iii. 12, *viscera misericordiae*.

44. The peculiarities which have been enumerated are found in greater or less frequency throughout the Vulgate. It is natural that they should be most abundant and striking in the parts which have been preserved least changed from the Old Latin, the Apocrypha, the Acts, Epistles, and Apocalypse. Jerome, who, as he often says, had spent many years in the schools of grammarians and rhetoricians, could not fail to soften down many of the asperities of the earlier version, either by adopting variations already in partial use, or by correcting faulty expressions himself as he revised the text. An examination of a few chapters in the Old and New Versions of the Gospels will show the character and extent of the changes which he ventured to introduce:—Luke i. 60, *οὐχί, non, Vet. L. nequaquam, Vulg.*; id. 65, *ἐν ὅλῃ τῇ ὄρεινῃ, in omni montana, Vet. L. super omnia montana, Vulg.*; ii. 1, *profiteretur, professio, Vet. L. describeretur, descriptio, Vulg.*; id. 13, *exercitus caelestis, Vet. L. militiae caelestis, Vulg.*; id. 34, *quod contradicetur, Vet. L. cui contr. Vulg.*; id. 49, *in propria Patris mei, Vet. L. in his quae patris mei sunt, Vulg.* Some words he seems to have changed constantly, though not universally: e. g. *obauditio, obaudio* (obedientia, obedio); *mensurare* (metiri); *dilectio* (caritas); *sacramentum* (mysterium), &c. And many of the most remarkable forms are confined to books which he did not revise: *elucidare, inalzare* (jucundari); *fumigabundus, illamentatus, indisciplinatus, insuspicabilis; exsecramentum* (*exterminium*), *gaudimonium; extollentia, honorificentia; horripilatio, inhonoratio*.

45. Generally it may be said that the Scriptural idioms of our common language have come to us mainly through the Latin; and in a wider view the Vulgate is the connecting link between classical and modern languages. It contains elements which belong to the earliest stage of Latin, and exhibits (if often in a rude form) the flexibility of the popular dialect. On the other hand, it has furnished the source and the model for a large portion of current Latin derivatives. Even a cursory examination of the characteristic words which have been given will show how many of them, and how many corresponding forms, have passed into living languages.^u

^u It would be interesting to trace the many striking parallels between the Vulgate and the African Apuleius (e. g. *incredibilis* (act.) *ineffugibilis, molestare, &c.*), or the Spanish Seneca (e. g. *inquietudo, inpunitus, &c.*).

^v Probably the most remarkable example of the in-

fluence of theology upon popular language, is the entire suppression of the correlatives of *verbum* in all the Romance languages. The forms occur in the religious technical sense (the Word), but otherwise they are replaced by the representatives of *parabola* (*parola, parole &c.*). Compare Diez, *Etym. Wörtb.* 253.

To follow out this question in detail would be out of place here; but it would furnish a chapter in the history of language fruitful in results and hitherto unwritten. Within a more limited range, the authority of the Latin Versions is undeniable, though its extent is rarely realised. The vast power which they have had in determining the theological terms of Western Christendom can hardly be overrated. By far the greater part of the current doctrinal terminology is based on the Vulgate, and, as far as can be ascertained, was originated in the Latin Version. *Predestination, justification, supererogation (supererogo), sanctification, salvation, mediator, regeneration, revelation, visitation (met.), propitiation*, first appear in the Old Vulgate. *Grace, redemption, election, reconciliation, satisfaction, inspiration, scripture*, were devoted there to a new and holy use. *Sacrament (μυστήριον)* and *communion* are from the same source; and though *baptism* is Greek, it comes to us from the Latin. It would be easy to extend the list by the addition of *orders, penance, congregation, priest*. But it can be seen from the forms already brought forward that the Latin Versions have left their mark both upon our language and upon our thoughts; and if the right method of controversy is based upon a clear historical perception of the force of words, it is evident that the study of the Vulgate, however much neglected, can never be neglected with impunity. It was the Version which alone they knew who handed down to the Reformers the rich stores of mediaeval wisdom; the Version with which the greatest of the Reformers were most familiar, and from which they had drawn their earliest knowledge of Divine truth. [B. F. W.]

VULTURE. The rendering in A. V. of the Heb. דַּיָּאָה (*dayyáh*) and אֵיָּאָה; and also in Job xxviii. 7, of אֵיָּאָה, *ayyáh*; elsewhere, in Lev. xi. 14, and Deut. xiv. 13, more correctly rendered "kite:" LXX. *γύψ* and *ἰκτινος*, Vulg. *vultur*; except in Is. xxxiv. 15, where LXX. read *εἰλαφος*, and Vulg. correctly *milvus*.

There seems no doubt but that the A. V. translation is incorrect, and that the original words refer to some of the smaller species of raptorial birds, as kites or buzzards. דַּיָּאָה is evidently synonymous with Arab. *هذبية*, *h'dayah*, the vernacular for the "kite" in North Africa, and without the epithet "red" for the black kite especially. Bochart (*Hieroz.* ii. 2, 195) explains it *Vultur niger*. The Samaritan and all other Eastern Versions agree in rendering it "kite." אֵיָּאָה (*ayyáh*) is yet more certainly referable to this bird, which in other passages it is taken to represent. Bochart (*Hieroz.* ii. b. 2, c. 8, p. 193) says it is the same bird which the Arabs call *يايا* (*yaya*) from its cry; but does not state what species this is, supposing it apparently to be the magpie, the Arab name for which, however, is *العقاع*, *el agaag*.

There are two very different species of bird comprised under the English term vulture: the griffon (*Gyps fulvus*, Sav.), Arab. *نسر*, *nesser*; Heb. נֶשֶׁר, *neshar*; invariably rendered "eagle" by A. V.; and the *percnopter*, or Egyptian vulture (*Neophron percnopterus*, Sav.), Arab. *رَحْمَة*, *rakhma*; Heb. רָחַט, *ráchat*; rendered "gier-eagle" by A. V.

The identity of the Hebrew and Arabic terms in these cases can scarcely be questioned. However degrading the substitution of the ignoble vulture for the royal eagle may at first sight appear in many passages, it must be borne in mind that the griffon is in all its movements and characteristics a majestic and royal bird, the largest and most powerful which is seen on the wing in Palestine, and far surpassing the eagle in size and power. Its only rival in these respects is the Bearded Vulture or Lammergeyer, a more uncommon bird everywhere, and which, since it is not, like the griffon, bald on the head and neck, cannot be referred to as *neshar* (see Mic. i. 16). Very different is the slovenly and cowardly Egyptian vulture, the familiar scavenger of all Oriental towns and villages, protected for its useful habits, but loathed and despised, till its name has become a term of reproach like that of the dog or the swine.

If we take the Heb. *ayyáh* to refer to the red kite (*milvus regalis*, Temm.), and *dayyáh* to the black kite (*milvus ater*, Temm.), we shall find the piercing sight of the former referred to by Job (xxviii. 7), and the gregarious habits of the latter by Isaiah (xxxiv. 15). Both species are inhabitants of Palestine, the red kite being found all over the country, as formerly in England, but nowhere in great numbers, generally soaring at a great height over the plains, according to Dr. Roth, and apparently leaving the country in winter. The black kite, which is so numerous everywhere as to be gregarious, may be seen at all times of the year, hovering over the villages and the outskirts of towns, on the look-out for offal and garbage, which are its favourite food. Vulture-like, it seldom, unless pressed by hunger, attacks living animals. It is therefore never molested by the natives, and builds its nest on trees in their neighbourhood, fantastically decorating it with as many rags of coloured cloth as it can collect.

There are three species of vulture known to inhabit Palestine:—

1. The Lammergeyer (*Gypaetos barbatus*, Cuv.), which is rare everywhere, and only found in desolate mountain regions, where it rears its young in the depth of winter among inaccessible precipices. It is looked upon by the Arabs as an eagle rather than a vulture.

2. The Griffon (*Gyps fulvus*, Sav.), mentioned above, remarkable for its power of vision and the great height at which it soars. Aristotle (*Anim. Hist.* vi. 5) notices the manner in which the griffon scents its prey from afar, and congregates in the wake of an army. The same singular instinct was remarked in the Russian war, when vast numbers of this vulture were collected in the Crimea, and remained till the end of the campaign in the neighbourhood of the camp, although previously they had been scarcely known in the country. "Where-soever the carcass is, there will the eagles be gathered together" (Matt. xxiv. 28); "Where the slain are, there is she" (Job xxxix. 30). The writer observed this bird universally distributed in all the mountainous and rocky districts of Palestine, and especially abundant in the south-east. Its favourite breeding-places are between Jerusalem and Jericho, and all round the Dead Sea.

The third species is the Egyptian vulture (*Neophron percnopterus*, Sav.), often called Pharaoh's hen, observed in Palestine by Hasselquist and all subsequent travellers, and very numerous everywhere. Two other species of very large size, the

black and cinereous vultures (*Vultur nubicus*, Smith, and *Vultur cinereus*, L.), although inhabitants of the neighbouring countries, and probably also of the south-east of Palestine, have not yet been noted in collections from that country. [H. B. T.]

W

WAGES.^a The earliest mention of wages is of a recompence not in money but in kind, to Jacob from Laban (Gen. xxix. 15, 20, xxx. 28, xxxi. 7, 8, 41). This usage was only natural among a pastoral and changing population like that of the tent-dwellers of Syria. In Egypt, money payments by way of wages were in use, but the terms cannot now be ascertained (Ex. ii. 9). The only mention of the rate of wages in Scripture is found in the parable of the householder and vineyard (Matt. xx. 2), where the labourer's wages are set at one denarius per day, probably = 7½d., a rate which agrees with Tobit v. 14, where a drachma is mentioned as the rate per day, a sum which may be fairly taken as equivalent to the denarius, and to the usual pay of a soldier (ten asses per diem) in the later days of the Roman republic (Tac. Ann. i. 17; Polyb. vi. 39). It was perhaps the traditional remembrance of this sum as a day's wages that suggested the mention of "drachmas wrung from the hard hands of peasants" (Shakspeare, *Jul. Caes.* iv. 3). In earlier times it is probable that the rate was lower, as until lately it was throughout India. In Scotland we know that in the last century a labourer's daily wages did not exceed sixpence (Smiles, *Lives of Engineers*, ii. 96). But it is likely that labourers, and also soldiers, were supplied with provisions (Michaelis, *Laws of Moses*, §130, vol. ii. p. 190, ed. Smith), as is intimated by the word *ὄψωνια*, used in Luke iii. 14, and 1 Cor. ix. 7, and also by Polybius, vi. 39. The Mishnah (*Baba metzia*, vii. 1, §5), speaks of victuals being allowed or not according to the custom of the place, up to the value of a denarius, *i. e.* inclusive of the pay.

The Law was very strict in requiring daily payment of wages (Lev. xix. 13; Deut. xxiv. 14, 15); and the Mishnah applies the same rule to the use of animals (*Baba metzia*, ix. 12). The employer who refused to give his labourers sufficient victuals is censured (Job xxiv. 11), and the iniquity of withholding wages is denounced (Jer. xxii. 13; Mal. iii. 5; James v. 4).

Wages in general, whether of soldiers or labourers, are mentioned (Hag. i. 6; Ez. xxix. 18, 19; John iv. 36). Burckhardt mentions a case in Syria resembling closely that of Jacob with Laban—a man who served eight years for his food, on condition of obtaining his master's daughter in marriage, and was afterwards compelled by his father-in-law to perform acts of service for him (*Syria*, p. 297). [H. W. P.]

^a 1. שכר; משפּרת; μισθός; merces.

2. פּעלה; μισθός; opus: wages for work done, from פּעל, "work" (Ges. p. 1117).

^b 1. אִשְׁרָנָה; χορηγία; muri: only in Ezr. v. 3.

2. (a) נִדְרָה; φραγμός; maceria. (b) נִדְרָה; φραγμοί; maceria. (c) נִדְרָה; διάστημα, φραγμός; sepes.

3. חומה; τείχος; murus.

WAGGON. [CART and CHARIOT.] The Oriental waggon or *arabah* is a vehicle composed of two or three planks fixed on two solid circular blocks of wood, from two to five feet in diameter, which serve as wheels. To the floor are sometimes attached wings, which splay outwards like the sides of a wheelbarrow. For the conveyance of passengers, mattresses or clothes are laid in the bottom, and the vehicle is drawn by buffaloes or oxen (Arundell, *Asia Minor*, ii. 191, 235, 238; Olearius, *Trav.* p. 309; Ker Porter, *Trav.* ii. 533.) Egyptian carts or waggons, such as were sent to convoy Jacob (Gen. xlv. 19, 21, 27), are described under CART. The covered waggons for conveying the materials of the tabernacle were probably constructed on Egyptian models. They were each drawn by two oxen (Num. vii. 3, 8). Herodotus mentions a four-wheeled Egyptian vehicle (*ἄμαξα*) used for sacred purposes (Her. ii. 63). [H. W. P.]

WALLS.^b Only a few points need be noticed in addition to what has been said elsewhere on wall-construction, whether in brick, stone, or wood. [BRICKS; HANDICRAFT; MORTAR.] 1. The practice common in Palestine of carrying foundations down to the solid rock, as in the case of the Temple, and in the present day with structures intended to be permanent (Joseph. *Ant.* xv. 11, §3; Luke vi. 48; Robinson, ii. 338; *Col. Ch. Chron.* (1857), p. 459). The pains taken by the ancient builders to make good the foundations of their work may still be seen, both in the existing substructions and in the number of old stones used in more modern constructions. Some of these stones—ancient, but of uncertain date—are from 20 feet to 30 feet 10 inches long, 3 feet to 6 feet 6 inches broad, and 5 feet to 7 feet 6 inches thick (Rob. i. 233, 282, 286, iii. 228). As is the case in numberless instances of Syrian buildings, either old or built of old materials, the edges and sometimes the faces of these stones are "bevelled" in flat grooves. This is commonly supposed to indicate work at least as old as the Roman period (Rob. i. 261, 286, ii. 75, 76, 278, 353, iii. 52, 58, 84, 229, 461, 493, 511; Fergusson, *Hdbk. of Arch.* p. 288). On the contrary side, see *Col. Ch. Chron.* (1858), p. 350.

But the great size of these stones is far exceeded by some of those at Baalbek, three of which are each about 63 feet long; and one, still lying in the quarry, measures 68 feet 4 inches in length, 17 feet 2 inches broad, and 14 feet 7 inches thick. Its weight can scarcely be less than 600 tons (Rob. iii. 505, 512; Volney, *Trav.* ii. 241).

2. A feature of some parts of Solomon's buildings, as described by Josephus, corresponds remarkably to the method adopted at Nineveh of encrusting or veneering a wall of brick or stone with slabs of a more costly material, as marble or alabaster (Joseph. *Ant.* viii. 5, §2; Fergusson, *Hdbk.* 202, 203).

3. Another use of walls in Palestine is to support mountain roads or terraces formed on the sides

4. חיל; δύναμις; virtus: also προτείχισμα; agr.

5. חוץ and חוץ; τοίχος; paries.

6. חרוץ; περίτειχος; muri: only in Dan. ix. 25.

7. (a) פתל; (b) פתל; Chald.; τοίχος; paries.

8. קיר; τοίχος; paries.

9. שור; τείχος; murus.

of hills for purposes of cultivation (Rob. ii. 493, iii. 14, 45).

4. The "path of the vineyards" (Num. xxii. 24) is illustrated by Robinson as a pathway through vineyards, with walls on each side (*B. R.* ii. 80; Stanley, *S. and P.* 102, 420; Lindsay, *Trav.* p. 239; Maundrell, *Early Trav.* p. 437). [WINDOW.] [H. W. P.]

WANDERING IN THE WILDERNESS. [WILDERNESS OF WANDERING.]

WAR. The most important topic in connexion with war is the formation of the army, which is destined to carry it on. This has been already described under the head of ARMY, and we shall therefore take up the subject from the point where that article leaves it. Before entering on a war of aggression the Hebrews sought for the Divine sanction by consulting either the Urim and Thummim (Judg. i. 1, xx. 27, 28; 1 Sam. xiv. 37, xxiii. 2, xxviii. 6, xxx. 8), or some acknowledged prophet (1 K. xxii. 6; 2 Chr. xviii. 5). The heathens betook themselves to various kinds of divination for the same purpose (Ez. xxi. 21). Divine aid was further sought in actual warfare by bringing into the field the Ark of the Covenant, which was the symbol of Jehovah Himself (1 Sam. iv. 4-18, xiv. 18), a custom which prevailed certainly down to David's time (2 Sam. xi. 11; comp. Ps. lxxviii. 1, 24). During the wanderings in the wilderness the signal for warlike preparations was sounded by priests with the silver trumpets of the sanctuary (Num. x. 9, xxxi. 6). Formal proclamations of war were not interchanged between the belligerents; but occasionally messages either deprecatory or defiant were sent, as in the cases of Jephthah and the Ammonites (Judg. xi. 12-27), Ben-hadad and Ahab (1 K. xx. 2), and again Amaziah and Jehoash (2 K. xiv. 8). Before entering the enemy's district spies were sent to ascertain the character of the country and the preparations of its inhabitants for resistance (Num. xiii. 17; Josh. ii. 1; Judg. vii. 10; 1 Sam. xxvi. 4). When an engagement was imminent a sacrifice was offered (1 Sam. vii. 9, xiii. 9), and an inspiring address delivered either by the commander (2 Chr. xx. 20) or by a priest (Deut. xx. 2). Then followed the battle-signal, sounded forth from the silver trumpets as already described, to which the host responded by shouting the war-cry (1 Sam. xvii. 52; Is. xlii. 13; Jer. l. 42; Ez. xxi. 22; Am. i. 14). The combat assumed the form of a number of hand-to-hand contests, depending on the qualities of the individual soldier rather than on the disposition of masses. Hence the high value attached to fleetness of foot and strength of arm (2 Sam. i. 23, ii. 18; 1 Chr. xii. 8). At the same time various strategic devices were practised, such as the ambushade (Josh. viii. 2, 12; Judg. xx. 36), surprise (Judg. vii. 16), or

^a מִצֹּר, lit. an "enclosing" or "besieging," and hence applied to the wall by which the siege was effected.

^b סֻלָּלָה. Saalschütz (*Archäol.* ii. 504) understands this term of the scaling-ladder, comparing the cognate *sullâm* (Gen. xxviii. 12), and giving the verb *shûphac*, which accompanies *sollâh*, the sense of a "hurried advancing" of the ladder.

^c תְּרִימִים. Some doubt exists as to the meaning of this term. The sense of "turrets" assigned to it by Gesenius (*Thes.* p. 330) has been objected to on the ground that the word always appears in the singular number, and in connexion with the expression "round about" the city. Hence the sense of "circumvallation" has

circumvention (2 Sam. v. 23). Another mode of settling the dispute was by the selection of champions (1 Sam. xvii.; 2 Sam. ii. 14), who were spurred on to exertion by the offer of high reward (1 Sam. xvii. 25, xviii. 25; 2 Sam. xviii. 11; 1 Chr. xi. 6). The contest having been decided, the conquerors were recalled from the pursuit by the sound of a trumpet (2 Sam. ii. 28, xviii. 16, xx. 22).

The siege of a town or fortress was conducted in the following manner:—A line of circumvallation^a was drawn round the place (Ez. iv. 2; Mic. v. 1), constructed out of the trees found in the neighbourhood (Deut. xx. 20), together with earth and any other materials at hand. This line not only cut off the besieged from the surrounding country, but also served as a base of operations for the besiegers. The next step was to throw out from this line one or more "mounts" or "banks"^b in the direction of the city (2 Sam. xx. 15; 2 K. xix. 32; Is. xxxvii. 33), which was gradually increased in height until it was about half as high as the city wall. On this mound or bank towers^c were erected (2 K. xxv. 1; Jer. lii. 4; Ez. iv. 2, xvii. 17, xxi. 22, xxvi. 8), whence the slingers and archers might attack with effect. Battering-rams^d (Ez. iv. 2, xxi. 22) were brought up to the walls by means of the bank, and scaling-ladders might also be placed on it. Undermining the walls, though practised by the Assyrians (Layard, *Nin.* ii. 371), is not noticed in the Bible: the reference to it in the LXX. and Vulg., in Jer. li. 58, is not warranted by the original text. Sometimes, however, the walls were attacked near the foundation, either by individual warriors who protected themselves from above by their shields (Ez. xxvi. 8), or by the further use of such a machine as the *Helepolis*,^e referred to in 1 Macc. xiii. 43. Burning the gates was another mode of obtaining ingress (Judg. ix. 52). The water-supply would naturally be cut off, if it were possible (Jud. vii. 7). The besieged, meanwhile, strengthened and repaired their fortifications (Is. xxii. 10), and repelled the enemy from the wall by missiles (2 Sam. xi. 24), by throwing over beams and heavy stones (Judg. ix. 53; 2 Sam. xi. 21; Joseph. *B. J.* v. 3, §3, 6, §3), by pouring down boiling oil (*B. J.* iii. 7, §28), or lastly by erecting fixed engines for the propulsion of stones and arrows (2 Chr. xxvi. 15). [ENGINE.] Sallies were also made for the purpose of burning the besiegers' works (1 Macc. vi. 31; *B. J.* v. 11, §4), and driving them away from the neighbourhood. The foregoing operations receive a large amount of illustration from the representations of such scenes on the Assyrian slabs. We there see the "bank" thrown up in the form of an inclined plane, with the battering-ram hauled up on it assaulting the walls: moveable towers of considerable elevation brought up, whence the warriors discharge their

been assigned to it by Michaelis, Keil (*Archäol.* ii. 303) and others. It is difficult, however, in this case, to see any distinction between the terms *dâyêk* and *mâtzôr*. The expression "round about" may refer to the custom of casting up banks at different points: the use of the singular in a collective sense forms a greater difficulty.

^d כְּרִימִים

^e This is described by Ammianus Marcellinus (xxiii. 4 §10) as a combination of the *testudo* and the battering ram, by means of which the besiegers broke through the lower part of the wall, and thus "leaped into the city," not from above, as the words *primâ facie* imply, but from below.

arrows into the city: the walls undermined, or attempts made to destroy them by picking to pieces the lower courses: the defenders actively engaged in archery, and averting the force of the battering-ram by chains and ropes: the scaling-ladders at length brought, and the conflict become hand-to-hand (Layard's *Nin.* ii. 366-374).

The treatment of the conquered was extremely severe in ancient times. The leaders of the host were put to death (Josh. x. 26; Judg. vii. 25), with the occasional indignity of decapitation after death (1 Sam. xvii. 51; 2 Macc. xv. 30; Joseph. *B. J.* i. 17, §2). The bodies of the soldiers killed in action were plundered (1 Sam. xxxi. 8; 2 Macc. viii. 27): the survivors were either killed in some savage manner (Judg. ix. 45; 2 Sam. xii. 31; 2 Chr. xxv. 12), mutilated (Judg. i. 6; 1 Sam. xi. 2), or carried into captivity (Num. xxxi. 26; Dent. xx. 14). Women and children were occasionally put to death with the greatest barbarity (2 K. viii. 12, xv. 16; Is. xiii. 16, 18; Hos. x. 14, xiii. 16; Am. i. 13; Nah. iii. 10; 2 Macc. v. 13): but it was more usual to retain the maidens as concubines or servants (Judg. v. 30; 2 K. v. 2). Sometimes the bulk of the population of the conquered country was removed to a distant locality, as in the case of the Israelites when subdued by the Assyrians (2 K. xvii. 6), and of the Jews by the Babylonians (2 K. xxiv. 14, xxv. 11). In addition to these measures, the towns were destroyed (Judg. ix. 45; 2 K. iii. 25; 1 Macc. v. 28, 51, x. 84), the idols and shrines were carried off (Is. xlvi. 1, 2), or destroyed (1 Macc. v. 68, x. 84); the fruit-trees were cut down, and the fields spoiled by overspreading them with stones (2 K. iii. 19, 25); and the horses were lamed (2 Sam. viii. 4; Josh. xi. 6, 9). If the war was carried on simply for the purpose of plunder or supremacy, these extreme measures would hardly be carried into execution; the conqueror would restrict himself to rifling the treasures (1 K. xiv. 26; 2 K. xiv. 14, xxiv. 13), or levying contributions (2 K. xviii. 14).

The Mosaic law mitigated to a certain extent the severity of the ancient usages towards the conquered. With the exception of the Canaanites, who were delivered over to the ban of extermination by the express command of God, it was forbidden to the Israelites to put to death any others than males bearing arms: the women and children were to be kept alive (Dent. xx. 13, 14). In a similar spirit of humanity the Jews were prohibited from felling fruit-trees for the purpose of making siege-works (Dent. xx. 19). The law further restricted the power of the conqueror over females, and secured to them humane treatment (Dent. xxi. 10-14). The majority of the savage acts recorded as having been practised by the Jews were either in retaliation for some gross provocation, as instanced in the cases of Adoni-bezek (Judg. i. 6, 7), and of David's treatment of the Ammonites (2 Sam. x. 2-4, xii. 31; 1 Chr. xx. 3); or else they were done by lawless usurpers, as in Menahem's treatment of the women of Tiphseh (2 K. xv. 16). The Jewish kings generally appear to have obtained credit for clemency (1 K. xx. 31).

The conquerors celebrated their success by the erection of monumental stones (1 Sam. vii. 12; 2 Sam. viii. 13, where, instead of "gat him a name," we should read "set up a memorial"), by hanging up trophies in their public buildings (1 Sam. xxi. 9, xxxi. 10; 2 K. xi. 10), and by triumphal songs and dances, in which the whole popu-

lation took part (Ex. xv. 1-21; Judg. v.; 1 Sam. xviii. 6-8; 2 Sam. xxii.; Jud. xvi. 2-17; 1 Macc. iv. 24). The death of a hero was commemorated by a dirge (2 Sam. i. 17-27; 2 Chr. xxxv. 25), or by a national mourning (2 Sam. iii. 31). The fallen warriors were duly buried (1 K. xi. 15), their arms being deposited in the grave beside them (Ez. xxxii. 27), while the enemies' corpses were exposed to the beasts of prey (1 Sam. xvii. 44; Jer. xxv. 33). The Israelites were directed to undergo the purification imposed on those who had touched a corpse, before they entered the precincts of the camp or the sanctuary (Num. xxxi. 19). The disposal of the spoil has already been described under *BOOTY*. [W. L. B.]

WASHING THE HANDS AND FEET.

The particular attention paid by the Jews to the cleansing of the hands and feet, as compared with other parts of the body, originated in the social usages of the East. As knives and forks were dispensed with in eating, it was absolutely necessary that the hand, which was thrust into the common dish, should be scrupulously clean; and again, as sandals were ineffectual against the dust and heat of an Eastern climate, washing the feet on entering a house was an act both of respect to the company and of refreshment to the traveller. The former of these usages was transformed by the Pharisees of the New Testament age into a matter of ritual observance (Mark vii. 3), and special rules were laid down as to the times and manner of its performance. The neglect of these rules by our Lord and His disciples drew down upon Him the hostility of that sect (Matt. xv. 2; Luke xi. 38). Whether the expression *πυγμαῖ* used by St. Mark has reference to any special regulation may perhaps be doubtful; the senses "oft" (A. V.), and "diligently" (Alford), have been assigned to it, but it may possibly signify "with the fist," as though it were necessary to close the one hand, which had already been cleansed, before it was applied to the unclean one. This sense appears preferable to the other interpretations of a similar character, such as "up to the wrist" (Lightfoot); "up to the elbow" (Theophylact); "having closed the hand" which is undergoing the washing (Grot.; Scalig.). The Pharisaical regulations on this subject are embodied in a treatise of the Mishnah, entitled *Yadaim*, from which it appears that the ablution was confined to the hand (2, §3), and that great care was needed to secure perfect purity in the water used. The ordinary, as distinct from the ceremonial, washing of hands before meals is still universally prevalent in Eastern countries (Lane, i. 190; Burckhardt's *Notes*, i. 63).

Washing the feet did not rise to the dignity of a ritual observance, except in connexion with the services of the sanctuary (Ex. xxx. 19, 21). It held a high place, however, among the rites of hospitality. Immediately that a guest presented himself at the tent-door, it was usual to offer the necessary materials for washing the feet (Gen. xviii. 4, xix. 2, xxiv. 32, xliii. 24; Judg. xix. 21; comp. Hom. *Od.* iv. 49). It was a yet more complimentary act, betokening equally humility and affection, if the host actually performed the office for his guest (1 Sam. xxv. 41; Luke vii. 38, 44; John xiii. 5-14; 1 Tim. v. 10). Such a token of hospitality is still occasionally exhibited in the East, either by the host, or by his deputy (Robinson's *Res.* ii. 229; Jowett's *Res.* pp. 78, 79). The feet were again washed before retiring to bed (Cant. v. 3). A symbolical significance is attached in John

xiii. 10 to washing the feet as compared with bathing the whole body, the former being partial (*νίπτω*), the latter complete (*λούω*), the former oft-repeated in the course of the day, the latter done once for all; whence they are adduced to illustrate the distinction between occasional sin and a general state of sinfulness. After being washed, the feet were on festive occasions anointed (Luke vii. 38; John xii. 3). The indignity attached to the act of washing another's feet, appears to have been extended to the vessel used (Ps. lx. 8). [W. L. B.]

WATCHES OF NIGHT (*אֲשֵׁמְרָה*: *φύλακῆ*). The Jews, like the Greeks and Romans, divided the night into military watches instead of hours, each watch representing the period for which sentinels or pickets remained on duty. The proper Jewish reckoning recognised only three such watches, entitled the first or "beginning of the watches" (Lam. ii. 19), the middle watch (Judg. vii. 19), and the morning watch (Ex. xiv. 24; 1 Sam. xi. 11). These would last respectively from sunset to 10 P.M.; from 10 P.M. to 2 A.M.; and from 2 A.M. to sunrise. It has been contended by Lightfoot (*Hor. Heb.* in Matt. xiv. 25) that the Jews really reckoned four watches, three only of which were in the dead of the night, the fourth being in the morning. This, however, is rendered improbable by the use of the term "middle," and is opposed to Rabbinical authority (Mishnah, *Berach.* 1, §1; Kimchi, on Ps. lxiii. 7; Rashi, on Judg. vii. 19). Subsequently to the establishment of the Roman supremacy, the number of watches was increased to four, which were described either according to their numerical order, as in the case of the "fourth watch" (Matt. xiv. 25; comp. Joseph. *Ant.* v. 6, §5), or by the terms "even, midnight, cock-crowing, and morning" (Mark xiii. 35). These terminated respectively at 9 P.M., midnight, 3 A.M., and 6 A.M. Conformably to this, the guard of soldiers was divided into four relays (Acts xii. 4), showing that the Roman régime was followed in Herod's army. Watchmen appear to have patrolled the streets of the Jewish towns (Cant. iii. 3, v. 7; Ps. cxxvii. 1,^d where for "waketh" we should substitute "watcheth;" Ps. cxxx. 6). [W. L. B.]

WATER OF JEALOUSY (Num. v. 11-31), (*מֵי הַזְּמִירִים*, "waters of bitterness," sometimes with *הַמְּאֲרָרִים* added, as "causing a curse" (*אֲרָר*, *ὕδωρ τοῦ ἐλέγχου*; Philo, ii. 310, *πότος ἐλέγχου*).

אֲשֵׁמְרָה הַתִּיכּוּנָה ב רֹאשׁ אֲשֵׁמְרוֹת

אֲשֵׁמְרָה הַבֶּקֶר ד שֶׁקֶר

^e Yet being an offering to "bring iniquity to remembrance" (v. 15), it is ceremonially rated as a "sin offering;" hence no oil is to be mixed with the meal before burning it, nor any frankincense to be placed upon it when burnt, which same rule was applied to "sin offerings" generally (Lev. v. 11). With meat offerings, on the contrary, the mixture of oil and the imposition of frankincense were prescribed (ii. 1, 2, 7, 14, 15).

^f Probably not the "water of separation" for purification, mixed with the ashes of the red heifer, for as its ceremonial property was to defile the pure and to purify the unclean (Num. xix. 21) who touched it, it could hardly be used in a rite the object of which was to establish the innocence of the upright or discover the guilt of the sinner, without the symbolism jarring. Perhaps water from the laver of the sanctuary is intended.

^g The words *נִפְלָה*, *לִנְפִיל*, *נִפְלָת*, considered in the A. V. by the word "rot," rather indicate, according to

The ritual prescribed consisted in the husband's bringing the woman before the priest, and the essential part of it is unquestionably the oath, to which the "water" was subsidiary, symbolical, and ministerial. With her he was to bring the tenth part of an ephah of barley-meal as an offering. Perhaps the whole is to be regarded from a judicial point of view, and this "offering" in the light of a court-fee.^e God Himself was suddenly invoked to judge, and His presence recognised by throwing a handful of the barley-meal on the blazing altar in the course of the rite. In the first instance, however, the priest "set her before the Lord" with the offering in her hand. The Mishnah (*Sotah*) prescribes that she be clothed in black with a rope girdle around her waist; and from the direction that the priest "shall uncover her head" (ver. 18), it would seem she came in veiled, probably also in black. As she stood holding the offering, so the priest stood holding an earthen vessel of holy water^f mixed with the dust from the floor of the sanctuary, and declaring her free from all evil consequences if innocent, solemnly devoted her in the name of Jehovah to be "a curse and an oath among her people," if guilty, further describing the exact consequences ascribed to the operation of the water in the "members" which she had "yielded as servants to uncleanness"^g (vers. 21, 22, 27; comp. Rom. vi. 19; and Theodoret, *Quaest.* x. in *Num.*). He then "wrote these curses in a book, and blotted them out with the bitter water," and, having thrown, probably at this stage of the proceedings, the handful of meal on the altar, "caused the woman to drink" the potion thus drugged, she moreover answering to the words of his imprecation, "Amen, Amen." Josephus adds, if the suspicion was unfounded, she obtained conception, if true, she died infamously. This accords with the sacred text, if she "be clean, then shall she be free and shall conceive seed" (ver. 28), words which seem to mean that when restored to her husband's affection she should be blessed with fruitfulness; or, that if conception had taken place before her appearance, it would have its proper issue in child-bearing, which, if she had been unfaithful, would be intercepted by the operation of the curse. It may be supposed that a husband would not be forward to publish his suspicions of his own injury, unless there were symptoms of apparent conception,^h and a risk of a child by another being presented to him as his own. In this case

Gesen. s. v. *נָפַל*, to "become or make lean." Michaelis thought ovarian dropsy was intended by the symptoms Josephus says, *τοῦ τε σκέλους ἐκπεσόντος αὐτῆς, καὶ τὴν κοιλίαν ὑδέρου καταλαμβάνοντος* (*Ant.* iii. 11, §6).

^h This is somewhat supported by the rendering in the A. V. of the words *וְהוּא לֹא נִתְפָּשָׁה*, v. 13, by "neither she be taken with the manner," the italicised words being added as explanatory, without any to correspond in the original, and pointing to the sudden cessation of "the manner" or "custom of women" (Gen. xviii. 11, xxxi. 35) i. e. the menstrual flux, suggesting, in the case of a woman not past the age of child-bearing, that conception had taken place. If this be the sense of the original, the suspicions of the husband would be so far based upon a fact. It seems, however, also possible that the words may be an extension of the sense of those immediately preceding, *וְעַד אֵין בָּהּ*, when the connected tenour would be, "and there be no witness against her, and she be not taken," i. e. taken in the fact; comp. John viii. 4, *αὐτὴ ἢ γινώσκειται ἢ ἐπαυτοφώρῳ μοιχευομένη*.

the woman's natural apprehensions regarding her own gestation would operate very strongly to make her shrink from the potion, if guilty. For plainly, the effect of such a ceremonial on the nervous system of one so circumstanced, might easily go far to imperil her life, even without the precise symptoms ascribed to the water. Meanwhile the rule would operate beneficially for the woman, if innocent, who would be during this interval under the protection of the court to which the husband had himself appealed, and so far secure against any violent consequence of his jealousy, which had thus found a vent recognized by law. Further, by thus interposing a period of probation the fierceness of conjugal jealousy might cool. On comparing this argument with the further restrictions laid down in the treatise *Sotah* tending to limit the application of this rite, there seems grave reason to doubt whether recourse was ever had to it in fact. [ADULTERY.] The custom of writing on a parchment words cabalistic or medical relating to a particular case, and then washing them off, and giving the patient the water of this ablution to drink, has descended among Oriental superstitions to the present day, and a sick Arab would probably think this the most natural way of "taking" a prescription. See, on the general subject, Groddeck *de vett. Hebr. purgat. castitatis* in Ugol. *Thesaur.* (Winer). The custom of such an ordeal was probably traditional in Moses' time, and by fencing it round with the wholesome awe inspired by the solemnity of the prescribed ritual, the lawgiver would deprive it to a great extent of its barbarous tendency, and would probably restrain the husband from some of the ferocious extremities to which he might otherwise be driven by a sudden fit of jealousy, so powerful in the Oriental mind. On the whole it is to be taken, like the permission to divorce by a written instrument, rather as the mitigation of a custom ordinarily harsh, and as a barrier placed in the way of uncalculating vindictiveness. Viewing the regulations concerning matrimony as a whole, we shall find the same principle animating them in all their parts—that of providing a legal channel for the course of natural feelings where irrepressible, but at the same time of surrounding their outlet with institutions apt to mitigate their intensity, and so assisting the gradual formation of a gentler temper in the bosom of the nation. The precept was given "because of the hardness of their hearts," but with the design and the tendency of softening them. (See some remarks in Spencer, *de Leg. Hebr.*) [H. H.]

WATER OF SEPARATION. [PURIFICATION.]

WAVE-OFFERING (תְּנוּפָה, "a waving," from נוּף, "to wave," תְּנוּפָה לִפְנֵי יְהוָה, "a waving before Jehovah"). This rite, together with that of "heaving" or "raising" the offering, was an inseparable accompaniment of peace-offerings. In such the right shoulder, considered the choicest part of the victim, was to be "heaved," and viewed as holy to the Lord, only eaten therefore by the priest; the breast was to be "waved," and eaten by the worshipper. On the second day of the Passover a sheaf of corn, in the green ear, was to be waved, accompanied by the sacrifice of an unblemished lamb of the first year, from the performance of which ceremony the days till Pentecost were to be counted. When that feast arrived, two sheaves, the first-fruits of the ripe corn, were to be

offered with a burnt-offering, a sin-offering, and two lambs of the first year for a peace-offering. These likewise were to be waved.

The Scriptural notices of these rites are to be found in Ex. xxix. 24, 28; Lev. vii. 30, 34, viii. 27, ix. 21, x. 14, 15, xxiii. 10, 15, 20; Num. vi. 20, xviii. 11, 18, 26-29, &c.

We find also the word תְּנוּפָה applied in Ex. xxxviii. 24, to the gold offered by the people for the furniture of the sanctuary. It is there called זָהָב הַתְּנוּפָה. It may have been waved when presented, but it seems not impossible that תְּנוּפָה had acquired a secondary sense so as to denote "free-will offering." In either case we must suppose the ceremony of waving to have been known to and practised by the Israelites before the giving of the Law.

It seems not quite certain from Ex. xxix. 26, 27, whether the waving was performed by the priest or by the worshipper with the former's assistance. The Rabbinical tradition represents it as done by the worshipper, the priest supporting his hands from below.

In conjecturing the meaning of this rite, regard must be had, in the first instance, to the kind of sacrifice to which it belonged. It was the accompaniment of peace-offerings. These not only, like the other sacrifices, acknowledged God's greatness and His right over the creature, but they witnessed to a ratified covenant, an established communion between God and man. While the sin-offering merely removed defilement, while the burnt-offering gave entirely over to God of His own, the victim being wholly consumed, the peace-offering, as establishing relations between God and the worshipper, was participated in by the latter, who ate, as we have seen, of the breast that was waved. The Rabbis explain the heaving of the shoulder as an acknowledgment that God has His throne in the heaven, the waving of the breast that He is present in every quarter of the earth. The one rite testified to His eternal majesty on high, the other to His being among and with His people.

It is not said in Lev. xxiii. 10-14, that a peace-offering accompanied the wave-sheaf of the Passover. On the contrary, the only bloody sacrifice mentioned in connexion with it is styled a burnt-offering. When, however, we consider that everywhere else the rite of waving belongs to a peace-offering, and that besides a sin and a burnt-offering, there was one in connexion with the wave-loaves of Pentecost (Lev. xxiii. 19), we shall be wary of concluding that there was none in the present case. The significance of these rites seems considerable. The name of the month Abib, in which the Passover was kept, means the month of the green ear of corn, the month in which the great produce of the earth has come to the birth. In that month the nation of Israel came to the birth; each succeeding Passover was the keeping of the nation's birthday. Beautifully and naturally, therefore, were the two births—that of the people into national life; that of their needful sustenance into yearly life—combined in the Passover. All first-fruits were holy to God: the first-born of men, the first-produce of the earth. Both principles were recognized in the Passover. When, six weeks after, the harvest had ripened, the first-fruits of its matured produce were similarly to be dedicated to God. Both were waved, the rite which attested the Divine presence and working all around us being surely most appropriate and significant in their case. [F. G.]

WAY. This word has now in ordinary parlance so entirely forsaken its original sense (except in combination, as in "highway," "causeway"), and is so uniformly employed in the secondary or metaphorical sense of a "custom" or "manner," that it is difficult to remember that in the Bible it most frequently signifies an actual road or track. Our translators have employed it as the equivalent of no less than eighteen distinct Hebrew terms. Of these, several had the same secondary sense which the word "way" has with us. Two others (אֶרֶב and נִתְיָב) are employed only by the poets, and are commonly rendered "path" in the A. V. But the term which most frequently occurs, and in the majority of cases signifies (though it also is now and then used metaphorically) an actual road, is דֶּרֶךְ, *derec*, connected with the German *treten* and the English "tread." It may be truly said that there is hardly a single passage in which this word occurs which would not be made clearer and more real if "road to" were substituted for "way of." Thus Gen. xvi. 7, "the spring on the road to Shur;" Num. xiv. 24, "the road to the Red Sea;" 1 Sam. vi. 12, "the road to Bethshemesh;" Judg. ix. 37, "the road to the oak^a of Meonenim;" 2 K. xi. 19, "the road to the gate." It turns that which is a mere general expression into a substantial reality. And so in like manner with the word *ὁδός* in the New Testament, which is almost invariably translated "way." Mark x. 32, "They were on the road going up to Jerusalem;" Matt. xx. 17, "and Jesus took the twelve disciples apart in the road"—out of the crowd of pilgrims who, like themselves, were bound for the Passover.

There is one use of both *derec* and *ὁδός* which must not be passed over, viz. in the sense of a religious course. In the Old Test. this occurs but rarely, perhaps twice: namely in Amos viii. 14, "the manner of Beersheba," where the prophet is probably alluding to some idolatrous rites then practised there; and again in Ps. cxxxix. 24, "look if there be any evil way," any idolatrous practices, "in me, and lead me in the everlasting way." But in the Acts of the Apostles *ὁδός*, "the way," "the road," is the received, almost technical, term for the new religion which Paul first resisted and afterwards supported. See Acts ix. 2, xix. 9, 23, xxii. 4, xxiv. 14, 22. In each of these the word "that" is an interpolation of our translators, and should have been put into italics, as it is in xxiv. 22.

The religion of Islam is spoken of in the Koran as "the path," (*et tarik*, iv. 66), and "the right path" (i. 5; iv. 174). Gesenius (*Thes.* 353) has collected examples of the same expression in other languages and religions. [G.]

WEAPONS. [ARMS.]

WEASEL (דְּלָה, *chôled*: γαλή: *mustela*) occurs only in Lev. xi. 29, in the list of unclean animals. According to the old versions and the Talmud, the Heb. *chôled* denotes "a weasel" (see Lewysohn, *Zool. des Talm.* p. 91, and Buxtorf, *Lex. v. Rab. et Talm.* p. 756); but if the word is identical with

the Arabic *chuld* (خلد) and the Syriac *chuldo* (ܫܘܠܘܢ), as Bochart (*Hieroz.* ii. 435) and others

^a This is more obscure in the A. V. even than the others:—"Come along by the plain of Meonenim."

have endeavoured to show, there is no doubt that "a mole" is the animal indicated. Gesenius (*Thes.* p. 474), however, has the following very true observation: "Satis constat animalium nomina per saepe in hac lingua hoc, in alia cognata aliud, id vero simile, animal significare." He prefers to render the term by "Weasel."

Moles are common enough in Palestine; Hasselquist (*Trav.* p. 120), speaking of the country between Jaffa and Rama, says he had never seen in any place the ground so cast up by moles as in these plains. There was scarce a yard's length between each mole-hill. It is not improbable that both the *Talpa europaea* and the *T. caeca*, the blind mole of which Aristotle speaks (*Hist. Anim.* i. 8, §3), occur in Palestine, though we have no definite information on this point. The family of *Mustelidae* also is doubtless well represented. Perhaps it is better to give to the Heb. term the same signification which the cognate Arabic and Syriac have, and understand a "mole" to be denoted by it. [MOLE.] [W. H.]

WEAVING (אָרַב). The art of weaving appears to be coeval with the first dawning of civilization. In what country, or by whom it was invented, we know not; but we find it practised with great skill by the Egyptians at a very early period, and hence the invention was not unnaturally attributed to them (Plin. vii. 57). The "vestures of fine linen" such as Joseph wore (Gen. xli. 42) were the product of Egyptian looms, and their quality, as attested by existing specimens, is pronounced to be not inferior to the finest cambric of modern times (Wilkinson, ii. 75). The Israelites were probably acquainted with the process before their sojourn in Egypt; but it was undoubtedly there that they attained the proficiency which enabled them to execute the hangings of the Tabernacle (Ex. xxxv. 35; 1 Chr. iv. 21), and other artistic textures. At a later period the Egyptians were still famed for their manufactures of "fine" (*i. e.* hackled) flax and of *chôri*,^b rendered in the A. V. "networks," but more probably a white material either of linen or cotton (Is. xix. 9). From them the Tyrians procured the "fine linen with brodered work" for the sails of their vessels (Ez. xxvii. 7), the handsome character of which may be inferred from the representations of similar sails in the Egyptian paintings (Wilkinson, ii. 131, 167). Weaving was carried on in Egypt, generally, but not universally, by men (Herod. ii. 35; comp. Wilkinson, ii. 84). This was the case also among the Jews about the time of the Exodus (1 Chr. iv. 21), but in later times it usually fell to the lot of the females to supply the household with clothing (1 Sam. ii. 19; 2 K. xxiii. 7), and an industrious housewife would produce a surplus for sale to others (Prov. xxxi. 13, 19, 24).

The character of the loom and the process of weaving can only be inferred from incidental notices. The Egyptian loom was usually upright, and the weaver stood at his work. The cloth was fixed sometimes at the top, sometimes at the bottom, so that the remark of Herodotus (ii. 85) that the Egyptians, contrary to the usual practice, pressed the woof downwards, must be received with reservation (Wilkinson, ii. 85). That a similar variety of usage prevailed among the Jews, may be inferred from the remark of St. John (xix. 23), that the seamless coat was woven "from the top" (ἐκ τῶν

knives). Tunics of this kind were designated by the Romans *rectae*, implying that they were made at an upright loom at which the weaver stood to his work, thrusting the woof upwards (Plin. viii. 74). The modern Arabs use a procumbent loom, raised above the ground by short legs (Burckhardt's *Notes*, i. 67). The Bible does not notice the loom itself, but speaks of the beam^c to which the warp was attached (1 Sam. xvii. 7; 2 Sam. xxi. 19); and of the pin^d to which the cloth was fixed, and on which it was rolled (Judg. xvi. 14). We have also notice of the shuttle,^e which is described by a term significant of the act of weaving (Job vii. 6); the thrum^f or threads which attached the web to the beam (Is. xxxviii. 12, *margin*); and the web^g itself (Judg. xvi. 14; A. V. "beam"). Whether the two terms in Lev. xiii. 48, rendered "warp"^g and "woof,"^h really mean these, admits of doubt, inasmuch as it is not easy to see how the one could be affected with leprosy without the other: perhaps the terms refer to certain kinds of texture (Knobel, *in loc.*). The shuttle is occasionally dispensed with, the woof being passed through with the hand (Robinson's *Bib. Res.* i. 169). The speed with which the weaver used his shuttle, and the decisive manner in which he separated the web from the thrum when his work was done, supplied vivid images, the former of the speedy passage of life (Job vii. 6), the latter of sudden death (Is. xxxviii. 12).

The textures produced by the Jewish weavers were very various. The coarser kinds, such as tent-cloth, sackcloth, and the "hairy garments" of the poor were made of goat's or camel's hair (Ex. xxvi. 7; Matt. iii. 4). Wool was extensively used for ordinary clothing (Lev. xiii. 47; Prov. xxvii. 26, xxxi. 13; Ez. xxvii. 18), while for finer work flax was used, varying in quality, and producing the different textures described in the Bible as "linen" and "fine linen." The mixture of wool and flax in cloth intended for a garment was interdicted (Lev. xix. 19; Deut. xxii. 11). With regard to the ornamental kinds of work, the terms *rikmah*, "needlework," and *ma'āshēh chōshēb*, "the work of the cunning workman," have been already discussed under the head of EMBROIDERER, to the effect that both kinds were produced in the loom, and that the distinction between them lay in the addition of a device or pattern in the latter, the *rikmah* consisting simply of a variegated stuff without a pattern. We may further notice the terms: (1) *shābats*¹ and *tashbēts*² applied to the robes of the priest (Ex. xxviii. 4, 39), and signifying *tesselated* (A. V. "brodered"), i. e. with depressions probably of a square shape worked in it, similar to the texture described by the Romans under the term *scutulatus* (Plin. viii. 73; Juv. ii. 97); this was produced in the loom, as it is expressly said to be the work of the weaver (Ex. xxxix. 27). (2) *Māshzār*¹ (A. V. "twined"), applied to the fine linen out of which the curtains of the tabernacle and the sacerdotal vestments were made (Ex. xxvi. 1, xxviii. 6, &c.): in this texture each thread consisted of several finer threads twisted together, as is described to have

been the case with the famed corslet of Amasis (Herod. iii. 47). (3) *Mishbetsōth zāhāv*^m (A. V. "of wrought gold"), textures in which gold thread was interwoven (Ps. xlv. 13). The Babylonians were particularly skilful in this branch of weaving, and embroidered groups of men or animals on the robes (Plin. viii. 74; Layard, *Nin.* ii. 413): the "goodly Babylonish garment" secreted by Achan was probably of this character (Josh. vii. 21). The sacerdotal vestments are said to have been woven in one piece without the intervention of any needlework to join the seams (Joseph. *Art.* iii. 7, §4). The "coat without seam" (χιτὼν ἄρραφος) worn by Jesus at the time of his crucifixion (John xix. 23), was probably of a sacerdotal character in this respect, but made of a less costly material (Carpzov, *Appar.* p. 72). [W. L. B.]

WEDDING. [MARRIAGE.]

WEEK (שָׁבִיעַ, or שִׁבְעָה, from שֶׁבַע, "seven," a heptad of any thing, but particularly used for a period of seven days: ἑβδομάς: *septimana*). We have also, and much oftener, שָׁבִיעָה, or שִׁבְעָה יָמִים.

Whatever controversies exist respecting the origin of the week, there can be none about the great antiquity, on particular occasions at least, among the Shemitic races, of measuring time by a period of seven days. This has been thought to be implied in the phrase respecting the sacrifices of Cain and Abel (Gen. iv. 3), "in process of time," literally "at the end of days." It is to be traced in the narrative of the subsidence of the Flood (Gen. viii. 10), "and he stayed yet other seven days;" and we find it recognized by the Syrian Laban (Gen. xxix. 27), "fulfil her week." It is needless to say that this division of time is a marked feature of the Mosaic law, and one into which the whole year was parted, the Sabbath sufficiently showing that. The week of seven days was also made the key to a scale of seven, running through the Sabbatical years up to that of jubilee. [See SABBATH; SABBATICAL YEAR; and JUBILEE, YEAR OF.]

The origin of this division of time is a matter which has given birth to much speculation. Its antiquity is so great, its observance so wide-spread, and it occupies so important a place in sacred things, that it has been very generally thrown back as far as the creation of man, who on this supposition was told from the very first to divide his time on the model of the Creator's order of working and resting. The week and the Sabbath are, if this be so, as old as man himself; and we need not seek for reasons either in the human mind or the facts with which that mind comes in contact, for the adoption of such a division of time, since it is to be referred neither to man's thoughts nor to man's will. A purely theological ground is thus established for the week and for the sacredness of the number seven. They who embrace this view support it by a reference to the six days' creation and the Divine rest on the seventh, which they consider to have been made known to man from the very first,

^c מִנְחָה; so called from its resemblance to a ploughman's yoke.

^e מִשְׁכָּח. This term is otherwise understood of the warp, as in the LXX. and the Vulgate (Ges. *Thes.* p. 890).

^e אָרַג. The same word describes both the web and the shuttle.

^f דָּלָה.

^g שָׁתִי.

^h עָרַב.

^g שִׁבְיָן.

^h תִּשְׁבִּיץ.

^h מִשְׁזָר.

^m מִשְׁבָּצוֹת זָהָב.

and by an appeal to the exceeding prevalence of the hebdomadal division of time from the earliest age—an argument the force of which is considered to be enhanced by the alleged absence of any natural ground for it.

To all this, however, it may be objected that we are quite in the dark as to when the record of the six days' creation was made known, that as human language is used and human apprehensions are addressed in that record, so the week being already known, the perfection of the Divine work and Sabbath may well have been set forth under the figure of one, the existing division of time moulding the document, instead of the document giving birth to the division; that old and wide-spread as is the recognition of that division, it is not universal; that the nations which knew not of it were too important to allow the argument from its prevalence to stand; and that so far from its being without ground in nature, it is the most obvious and convenient way of dividing the month. Each of these points must now be briefly considered:—

1st. That the week rests on a theological ground may be cheerfully acknowledged by both sides; but nothing is determined by such acknowledgment as to the original cause of adopting this division of time. The records of creation and the fourth commandment give no doubt the ultimate and therefore the deepest ground of the weekly division, but it does not therefore follow that it was not adopted for lower reasons before either was known. Whether the week gave its sacredness to the number seven, or whether the ascendancy of that number helped to determine the dimensions of the week, it is impossible to say. The latter fact, the ancient ascendancy of the number seven, might rest on divers grounds. The planets, according to the astronomy of those times, were seven in number; so are the notes of the diatonic scale; so also many other things naturally attracting observation.

2ndly. The prevalence of the weekly division was indeed very great, but a nearer approach to universality is required to render it an argument for the view in aid of which it is appealed to. It was adopted by all the Shemitic races, and, in the later period of their history at least, by the Egyptians. Across the Atlantic we find it, or a division all but identical with it, among the Peruvians. It also obtains now with the Hindoos, but its antiquity among them is matter of question. It is possible that it was introduced into India by the Arabs and Mohammedans. So in China we find it, but whether universally or only among the Buddhists admits of doubt. (See, for both, Priaulx's *Questiones Moisaicae*, a work with many of the results of which we may be well expected to quarrel, but which deserves, in respect not only of curious learning, but of the vigorous and valuable thought with which it is impregnated, to be far more known than it is.) On the other hand, there is no reason for thinking the week known till a late period either to Greeks or Romans.

3rdly. So far from the week being a division of time without ground in nature, there was much to recommend its adoption. Where the days were named from planetary deities, as among first the Assyrians and Chaldees, and then the Egyptians, there of course each period of seven days would constitute a whole, and that whole might come to be recognized by nations that disregarded or rejected the practice which had shaped and determined it. But further, the week is a most natural and nearly an exact qua-

dripartition of the month, so that the quarters of the moon may easily have suggested it.

It is beside the purpose of this article to trace the hebdomadal division among other nations than the Hebrews. The week of the Bible is that with which we have to do. Even if it were proved that the planetary week of the Egyptians, as sketched by Dion Cassius (*Hist. Rom.* xxxvii. 18), existed at or before the time of the Exodus, the children of Israel did not copy that. Their week was simply determined by the Sabbath; and there is no evidence of any other day, with them, having either had a name assigned to it, or any particular associations bound up with it. The days seemed to have been distinguished merely by the ordinal numerals, counted from the Sabbath. We shall have indeed to return to the Egyptian planetary week at a later stage of our inquiry, but our first and main business, as we have already said, is with the week of the Bible.

We have seen in Gen. xxix. 27, that it was known to the ancient Syrians, and the injunction to Jacob, "fulfil her week," indicates that it was in use as a fixed term for great festive celebrations. The most probable exposition of the passage is, that Laban tells Jacob to fulfil Leah's *week*, the proper period of the nuptial festivities in connexion with his marriage to her, and then he may have Rachel also (*comp.* Judg. xiv.). And so too for funeral observance, as in the case of the obsequies of Jacob, Joseph "made a mourning for his father seven days" (Gen. l. 10). But neither of these instances, any more than Noah's procedure in the ark, go further than showing the custom of observing a term of seven days for any observance of importance. They do not prove that the whole year, or the whole month, was thus divided at all times, and without regard to remarkable events.

In Exodus of course the week comes into very distinct manifestation. Two of the great feasts—the Passover and the Feast of Tabernacles—are prolonged for seven days after that of their initiation (Exod. xii. 15-20, &c.), a custom which remains in the Christian Church, in the rituals of which the remembrances and topics of the great festivals are prolonged till what is technically called the *octave*. Although the Feast of Pentecost lasted but one day, yet the time for its observance was to be counted by weeks from the Passover, whence one of its titles, "the Feast of Weeks."

The division by seven was, as we have seen, expanded so as to make the seventh month and the seventh year Sabbatical. To whatever extent the laws enforcing this may have been neglected before the Captivity, their effect, when studied, must have been to render the words שָׁבוּעַ, ἑβδομάς, *week*, capable of meaning a seven of years almost as naturally as a seven of days. Indeed the generality of the word would have this effect at any rate. Hence their use to denote the latter in prophecy, more especially in that of Daniel, is not mere arbitrary symbolism, but the employment of a not unfamiliar and easily understood language. This is not the place to discuss schemes of prophetic interpretation, nor do we propose giving our opinion of any such, but it is connected with our subject to remark that, whatever be the merits of that which in Daniel and the Apocalypse understands a year by a *day*, it cannot be set aside as forced and unnatural. Whether days were or were not intended to be thus understood in the places in question, their being so would have been a congruous, and we may say

logical attendant on the scheme which counts weeks of years, and both would have been a natural computation to minds familiar and occupied with the law of the Sabbatical year.

In the N. T. we of course find such clear recognition of and familiarity with the week as needs scarcely be dwelt on. Sacred as the division was, and stamped deep on the minds and customs of God's people, it now received additional solemnity from our Lord's last earthly Passover gathering up His work of life into a week.

Hence the Christian Church, from the very first, was familiar with the week. St. Paul's language (1 Cor. xvi. 2, *κατὰ μίαν σαββάτων*) shows this. We cannot conclude from it that such a division of time was observed by the inhabitants of Corinth generally; for they to whom he was writing, though doubtless the majority of them were Gentiles, yet knew the Lord's Day, and most probably the Jewish Sabbath. But though we can infer no more than this from the place in question, it is clear that if not by this time, yet very soon after, the whole Roman world had adopted the hebdomadal division. Dion Cassius, who wrote in the 2nd century, speaks of it as both universal and recent in his time. He represents it as coming from Egypt, and gives two schemes, by one or other of which he considers that the planetary names of the different days were fixed (Dion Cassius, xxvii. 18). Those names, or corresponding ones, have perpetuated themselves over Christendom, though no associations of any kind are now connected with them, except in so far as the whimsical conscience of some has quarrelled with their Pagan origin, and led to an attempt at their disuse. It would be interesting, though foreign to our present purpose, to inquire into the origin of this planetary week. A deeply-learned paper in the *Philological Museum*, by the late Archdeacon Hare,* gives the credit of its invention to the Chaldees. Dion Cassius was however pretty sure to have been right in tracing its adoption by the Roman world to an Egyptian origin. It is very striking to reflect that while Christendom was in its cradle, the law by which she was to divide her time came without collusion with her into universal observance, thus making things ready for her to impose on mankind that week on which all Christian life has been shaped—that week grounded on no worship of planetary deities, nor dictated by the mere wish to quadripartite the month, but based on the earliest lesson of revelation, and proposing to man his Maker's model as that whereby to regulate his working and his rest—that week which once indeed in modern times it has been attempted to abolish, because it was attempted to abolish the whole Christian faith, but which has kept, as we are sure it ever will keep, its ground, being bound up with that other, and sharing therefore in that other's invincibility and perpetuity. [F. G.]

WEEKS, FEAST OF. [PENTECOST.]

WEIGHTS AND MEASURES.

I. WEIGHTS.

Introduction.—It will be well to explain briefly the method of inquiry which led to the conclusions stated in this article, the subject being intricate, and the conclusions in many main particulars different from any at which other investigators have arrived. The disagreement of the opinions

respecting ancient weights that have been formed on the evidence of the Greek and Latin writers shows the importance of giving the first place to the evidence of monuments. The evidence of the Bible is clear, except in the case of one passage, but it requires a monumental commentary. The general principle of the present inquiry was to give the evidence of the monuments the preference on all doubtful points, and to compare it with that of literature, so as to ascertain the purport of statements which otherwise appeared to be explicable in two, or even three, different ways. Thus, if a certain talent is said to be equal to so many Attic drachms, these are usually explained to be drachms on the old, or Commercial, standard, or on Solon's reduced standard, or again on the further reduced standard equal to that of Roman denarii of the early emperors; but if we ascertain from weights or coins the weight of the talent in question, we can decide with what standard it is compared, unless the text is hopelessly corrupt.

Besides this general principle, it will be necessary to bear in mind the following postulates.

1. All ancient Greek systems of weight were derived, either directly or indirectly, from an Eastern source.

2. All the older systems of ancient Greece and Persia, the Aeginetan, the Attic, the Babylonian, and the Euboic, are divisible either by 6000, or by 3600.

3. The 6000th or 3600th part of the talent is a divisor of all higher weights and coins, and a multiple of all lower weights and coins, except its two-thirds.

4. Coins are always somewhat below the standard weight.

5. The statements of ancient writers as to the relation of different systems are to be taken either as indicating original or current relation. When a set of statements shows a special study of metrology we must infer original relation; isolated statements may rather be thought to indicate current relation. All the statements of a writer, which are not borrowed, probably indicate either the one or the other kind of relation.

6. The statements of ancient writers are to be taken in their seemingly-obvious sense, or discarded altogether as incorrect or unintelligible.

7. When a certain number of drachms or other denominations of one metal are said to correspond to a certain number of drachms or other denominations of another metal, it must not be assumed that the system is the same in both cases.

Some of these postulates may seem somewhat strict, but it must be recollected that some, if not all, of the systems to be considered have a mutual relation that is very apt to lead the inquirer to visionary results if he does not use great caution in his investigations.

The information respecting the Hebrew weights that is contained in direct statements necessitates an examination of the systems used by, or known to, the Greeks as late as Alexander's time. We begin with such an examination, then state the direct data for the determination of the Hebrew system or systems, and finally endeavour to effect that determination, adding a comparative view of all our main results.

1. *Early Greek talents.*—Three principal systems were used by the Greeks before the time of Alexander, those of the Aeginetan, the Attic, and the Euboic talents.

* *Philolog. Mus.* vol. i.

1. The Aeginetan talent is stated to have contained 60 minae, and 6000 drachms. The following points are incontestably established on the evidence of ancient writers. Its drachm was heavier than the Attic, by which, when unqualified, we mean the drachm of the full monetary standard, weighing about 67.5 grains Troy. Pollux states that it contained 10,000 Attic drachms and 100 Attic minae. Aulus Gellius, referring to the time of Demosthenes, speaks of a talent being equal to 10,000 drachms, and, to leave no doubt, says they would be the same number of denarii, which in his own time were equal to current reduced Attic drachms, the terms drachms and denarii being then used interchangeably. In accordance with these statements, we find a monetary system to have been in use in Macedonia and Thrace, of which the drachm weighs about 110 grs., in very nearly the proportion required to the Attic (6 : 10 :: 67.5 : 112.5).

The silver coins of Aegina, however, and of many ancient Greek cities, follow a lower standard, of which the drachm has an average maximum weight of about 96 grs. The famous Cyzicene staters of electrum appear to follow the same standard as the coins of Aegina, for they weigh about 240 grs., and are said to have been equal in value to 28 Attic drachms of silver, a Daric, of 129 grs., being equal to 20 such drachms, which would give the Cyzicenes (20 : 129 :: 28 : 180) three-fourths of gold, the very proportion assigned to the composition of electrum by Pliny. If we may infer that the silver was not counted in the value, the Cyzicenes would be equal to low didrachms of Aegina. The drachm obtained from the silver coins of Aegina has very nearly the weight, 92.3 grs., that Boeckh assigns to that of Athens before Solon's reduction, of which the system continued in use afterwards as the Commercial talent. The coins of Athens give a standard, 67.5 grs., for the Solonian drachm that does not allow, taking that standard for the basis of computation, a higher weight for the ante-Solonian drachm than about that computed by Boeckh.

An examination of Mr. Burgon's weights from Athens, in the British Museum, has, however, induced us to infer a higher standard in both cases. These weights bear inscriptions which prove their denominations, and that they follow two systems. One weighing 9980 grs. troy has the inscription **MNA ATOP** (*μνᾶ ἀγοραῖος*?), another weighing 7171, simply **MNA**. We have therefore two systems evidently in the relation of the Commercial Attic, and Solonian Attic (9980 : 7171 :: 138.88 : 99.7 instead of 100), a conclusion borne out by the fuller data given a little later (§ I. 2). The lower weight is distinguished by **ΔΕΜΟ** on a weight of 3482 ($\times 2 = 6964$) grs., and by **ΞΔ** **ΟΔ** **ΓΟ** on one of 884 ($\times 8 = 7072$): its mina was therefore called *δημοσία*. The identity of these two systems, the Market and the Popular, with the Commercial and Solonian of Athens, is therefore evident, and we thus obtain a higher standard for both Attic talents. From the correct relation of the weights of the two minae given above, we may compute the drachms of the two talents at about 99.8 and 71.7 grs. The heavier standard of the two Attic systems afforded by these weights reduces the difficulty that is occasioned by the difference of the two Aeginetan standards.

We thus obtain the following principal standards of the Aeginetan weight.

a. The Macedonian talent, or Aeginetan of the

writers, weighing about 660,000 grs., containing 60 minae and 6000 drachms.

b. The Commercial talent of Athens, used for the coins of Aegina, weighing, as a monetary talent, never more than about 576,000 grs., reduced from a weight-talent of about 598,800, and divided into the same principal parts as the preceding.

It may be objected to this opinion, that the coins of Aegina should rather give us the true Aeginetan standard than those of Macedonia, but it may be replied, that we know from literature and monuments of but two Greek systems heavier than the ordinary or later Attic, and that the heavier of these systems is sometimes called Aeginetan, the lighter, which bears two other names, never.

2. The Attic talent, when simply thus designated, is the standard weight introduced by Solon, which stood to the older or Commercial talent in the relation of 100 to 138. Its average maximum weight, as derived from the coins of Athens and the evidence of ancient writers, gives a drachm of about 67.5 grs.; but Mr. Burgon's weights, already shown, enable us to raise this sum to 71.7. Those weights have also enabled us to make a very curious discovery. We have already seen that two minae, the Market and the Popular, are recognized in them, one weight, having the inscription **MNA ATOP** (*μνᾶ ἀγοραῖος*?), weighing 9980 grs., and another, inscribed **MNA** (*μνᾶ[δημοσία]*), weighing 7171 grs., these being in almost exactly the relation of the Commercial and ordinary Attic minae *δημόσιαι*. There is no indication of any third system, but certain of the marks of value prove that the lower system had two talents, the heavier of which was double the weight of the ordinary talent. No. 9 has the inscription **TETAPT**, "the quarter," and weighs 3218 grs., giving a unit of 12872 grs.; no. 14, inscribed **EMIT** **ETAP**, "the half-quarter," weighs 1770 grs., giving a unit of 14160 grs. We thus obtain a mina twice that of Solon's reduction. The probable reason for the use of this larger Solonian talent will be shown in a later place (§ IV.). These weights are of about the date of the Peloponnesian War. (See Table A.)

From these data it appears that the Attic talent weighed about 430,260 grs. by the weights, and that the coins give a talent of about 405,000 grs., the latter being apparently the weight to which the talent was reduced after a time, and the maximum weight at which it is reckoned by ancient writers. It gradually lost weight in the coinage, until the drachm fell to about 57 grs. or less, thus coming to be equivalent to, or a little lighter than, the denarius of the early Caesars. It is important, when examining the statements of ancient writers, to consider whether the full monetary weight of the drachm, mina, or talent, or the weight after this last reduction, is intended. There are cases, as in the comparison of a talent fallen into disuse, where the value in Attic drachms or denarii so described is evidently used with reference to the full Attic monetary weight.

3. The Euboic talent, though used in Greece, is also said to have been used in Persia, and there can be no doubt of its Eastern origin. We therefore reserve the discussion of it for the next section (§ II., 2).

II. *Foreign talents of the same period.*—Two foreign systems of the same period, besides the Hebrew, are mentioned by ancient writers, the Babylonian talent and the Euboic, which Herodotus

A.—TABLE OF MR. BURGON'S WEIGHTS FROM ATHENS.
All these weights are of lead, except nos. 15 and 38, which are of bronze.

No.	Weight Grs. troy.	Inscription.	Type.	Con- dition. ⁵	Value Attic Com- mercial. ⁶	Excess or deficiency	Value Attic Solonian. ⁷	Excess or deficiency.
1	9980	MNA AΓOP	Dolphin	A	Mina			
2	9790		Id.	D	(Mina)	-190		
3	7171	MNA	Id.	A			Mina	
4	7048		Id.	d			(Mina)	-123
5	4424		Diota	B			$\frac{1}{3}$ MINA?	-356.6
6	3874		Tortoise	B			$\frac{1}{4}$ MINA?	+288.5
7	3482	ΔEMO	Id. ¹	B			$\frac{1}{4}$ Mina	-103.5
8	3461		Turtle	B			$\frac{1}{4}$ Mina	-124.5
9	3218	TETAPT	Tortoise	A? or D?			$\frac{1}{4}$ MINA	-367.5
10	2959		Half diota	d			$\frac{1}{4}$ MINA?	+90.6
11	2865	MO	Turtle	B			$\frac{1}{5}$ MINA?	-3.4
12	2210	ΔEMO	Half diota	C			$\frac{1}{6}$ MINA	-180.3
13	1872		Half turtle	B			$\frac{1}{8}$ MINA	+79.2
14	1770	EMITETAP	Half tortoise	B			$\frac{1}{8}$ MINA	-22.7
15	1698		Crescent	B?	$\frac{1}{8}$ Mina?	-298		
16	1648			B	$\frac{1}{8}$ Mina?	-348		
17	1603	Γ M		B? or D?	$\frac{1}{8}$ Mina?	-393		
18	1348	B		A			2 deca- drachms.	-86.2
19	1221	MO	Quarter diota ²	B			$\frac{1}{12}$ MINA?	+35.8
20	1172	ΔH	Crescent	B			$\frac{1}{12}$ MINA?	-23.1
21	1171		Crescent	B			$\frac{1}{12}$ MINA?	-24.1
22	1082		Half turtle ³	B	$\frac{1}{10}$ Mina?	+84	$\frac{1}{8}$ Mina?	-113.1
23	1045	ΔEMO	Crescent	E			$\frac{1}{10}$ Mina?	-150.1
24	988	ΔEMO	Diota in wreath ⁴	B			$\frac{1}{10}$ Mina?	+91.6
25	928.5	ΔEMO	Owl, A. in field ⁴	C			$\frac{1}{10}$ Mina	+32.1
26	924		Half crescent and star	B			$\frac{1}{8}$ Mina	+27.6
27	915.5			D?			$\frac{1}{10}$ Mina	+19.1
28	910.5			B			$\frac{1}{10}$ Mina	+14.1
29	901		Quarter diota	B			$\frac{1}{10}$ Mina	+4.6
30	889	Δ . . O		d			$\frac{1}{10}$ Mina	-7.3
31	884	ΔE OΓΔO		C?			$\frac{1}{10}$ Mina	-12.3
32	869		Rose	C?			$\frac{1}{8}$ Mina	-27.3
33	859	ΔEMO	Uncertain obj. in wreath ⁴	d			$\frac{1}{8}$ Mina	-37.3
34	845		Half crescent	B			$\frac{1}{8}$ Mina?	-51.3
35	756.5	Δ		D?	4 didrachms	-41.9		
36	541.5			B			8 drachms?	-32.1
37	527.5	Π		B	$\frac{1}{5}$ of $\frac{1}{4}$ mina?	+28.5		
38	450			B?	5 drachms?	-49	6 drachms?	+19.7
39	411			B	4 drachms?	+11.8	6 drachms?	-19.2
40	388			B?	4 drachms?	-11.2	5 drachms?	+29.4

¹ Countermark, tripod. ² Countermark, prow. ³ Turtle, headless? ⁴ Countermark.
⁵ Explanation of signs: A, Scarcely injured. B, A little weight lost. C, More than a little lost. D, Much weight lost. d, Much corroded. E, Very much weight lost. When two signs are given, the former is the more probable. ⁶ The weight of the Commercial Attic mina is here assumed to be about 9980 grs. ⁷ The weight of the Solonian Attic mina is here assumed to be about 7171 grs. The heavier talent is indicated by capital letters.

B.—TABLE OF WEIGHTS FROM NINEVEH.

Two weights in the series are omitted in this table: one is a large duck representing the same weight as no. 1, but much injured; the other is a small lion, of which the weight is doubtful, as it cannot be decided whether it was adjusted with one or two rings.

No.	Form and Material.	Phœnician Inscriptions.	Cuneiform Inscription.	Marks of Value	Con- dition. ¹	Weight. Grs. troy.	Computed Weight.	Division of	
								Gt. T.	Lesser T
1	Duck stone		XXX Manehs		A	233,300	239,760	..	$\frac{1}{8}$
2	" "		X Manehs		B	77,500	79,920	..	$\frac{1}{8}$
3	" "				B	15,000	15,984	..	..
4	Lion bronze				B	230,460	239,760	$\frac{1}{4}$	..
5	" "	XV Manehs			B	77,820	79,920	$\frac{1}{12}$	..
6	" "	V Manehs	V Manehs		B	44,196	47,952	$\frac{1}{20}$	..
7	" "	III Manehs	III Manehs		A	30,744	31,968	$\frac{1}{30}$	..
8	" "	II Manehs	II Manehs		B	29,796	Id.	$\frac{1}{30}$	..
9	" "	II Manehs	II Manehs		B	14,604	15,984	..	$\frac{1}{30}$
10	" "	II Manehs			A	15,984	Id.	..	..
11	" "	Maneh	Maneh		B	14,724	Id.	$\frac{1}{60}$	..
12	" "				B	10,272	?	..	..
13	" "				B	7,224	7,992	..	$\frac{1}{60}$
14	" "	Maneh	Maneh		B	7,404	Id.	..	$\frac{1}{60}$
15	" "	Maneh	Maneh		B	3,708	3,996	..	..
16	" "	Maneh	Maneh		B	3,060	3,196	$\frac{1}{6}$ M	..
17	" "	Fifth Quarter			B	3,648	3,996	$\frac{1}{6}$ M	..
18	Duck stone			IIIIII	C	2,904	3,196	..	..
19	" "			IIIIII	B	2,748	Id.	..	..
20	" "			IIIIIIII	B	1,968	2,131	..	..

¹ A, Well preserved. B, Somewhat injured. C, Much injured.

relates to have been used by the Persians of his time respectively for the weighing of their silver and gold paid in tribute.

1. The Babylonian talent may be determined from existing weights found by Mr. Layard at Nineveh. These are in the forms of lions and ducks, and are all upon the same system, although the same denominations sometimes weigh in the proportion of 2 to 1. On account of their great importance we insert a table, specifying their weights, inscriptions, and degree of preservation. (See Table B, previous page.)

From these data we may safely draw the following inferences.

The weights represent a double system, of which the heavier talent contained two of the lighter talents.

The heavier talent contained 60 manehs. The maneh was divided into thirtieths and sixtieths. We conclude the units having these respective relations to the maneh of the heavy talent to be divisions of it, because in the case of the first a thirtieth is a more likely division than a fifteenth, which it would be if assigned to the lighter talent, and because, in the case of the second, eight sixtieths is a more likely division than eight thirtieths.

The lighter talent contained 60 manehs. According to Dr. Hincks, the maneh of the lighter talent was divided into sixtieths, and these again into thirtieths. The sixtieth is so important a division in any Babylonian system, that there can be no doubt that Dr. Hincks is right in assigning it to this talent, and moreover its weight is a value of great consequence in the Babylonian system as well as in one derived from it. Besides, the sixtieth bears a different name from the sixtieth of the heavier talent, so that there must have been a sixtieth in each, unless, but this we have shown to be unlikely, the latter belongs to the lighter talent, which would then have had a sixtieth and thirtieth. The following table exhibits our results.

<i>Heavier Talent.</i>		Gr. troy.
$\frac{1}{60}$ Maneh		266.4
$\frac{1}{30}$ Maneh		532.8
60	30 Maneh	15,984
3600	1800 60 Talent	959,040
<i>Lighter Talent.</i>		Gr. troy.
$\frac{1}{30}$ of $\frac{1}{60}$ Maneh		4.44
$\frac{1}{60}$ Maneh		133.2
1800	60 Maneh	7,992
108000	3600 60 Talent	479,520

Certain low subdivisions of the lighter talent may be determined from smaller weights, in the British Museum, from Babylonia or Assyria, not found with those last described. These are, with one exception, ducks, and have the following weights, which we compare with the multiples of the smallest subdivision of the lighter talent.

Smaller Babylonian or Assyrian Weights.	Gr. troy.	Thirtieths of Sixtieth of Maneh.	
		Unit, $\frac{1}{30}$	Supposed unit, $\frac{1}{60}$.
1. Duck, marked II, w ^t .	329	80. 355.2	320
2. "	120	30. 133.2	120
3. "	119		
4. "	100	25. 111	100
5. "	87+	22. 97.6	88
6. Weight like short stepper.	83	21. 93.2	84
7. Duck.	80+	20. 88.8	80
8. "	40-	10. 44.4	40
9. "	34-	8. 35.5	32
10. "	19	5. 22.2	20

Before comparing the evidence of the coins which we may suppose to have been struck according to the Babylonian talent, it will be well to ascertain whether the higher or lower talent was in use, or whether both were, in the period of the Persian coins.

Herodotus speaks of the Babylonian talent as not greatly exceeding the Euboic, which has been computed to be equivalent to the Commercial Attic, but more reasonably as nearly the same as the ordinary Attic. Pollux makes the Babylonian talent equal to 7000 Attic drachms. Taking the Attic drachm at 67.5 grs., the standard probably used by Pollux, the Babylonian talent would weigh 472,500, which is very near the weight of the lighter talent. Aelian says that the Babylonian talent was equal to 72 Attic minae, which, on the standard of 67.5 to the drachm, gives a sum of 486,000. We may therefore suppose that the lighter talent was generally, if not universally, in use in the time of the Persian coins.

Herodotus relates that the king of Persia received the silver tribute of the satrapies according to the Babylonian talent, but the gold, according to the Euboic. We may therefore infer that the silver coinage of the Persian monarchy was then adjusted to the former, the gold coinage to the latter, if there was a coinage in both metals so early. The oldest coins, both gold and silver, of the Persian monarchy, are of the time of Herodotus, if not a little earlier; and there are still more ancient pieces, in both metals, of the same weights as Persian gold and silver coins, which are found at or near Sardes, and can scarcely be doubted to be the coinage of Croesus, or of another Lydian king of the 6th century. The larger silver coins of the Persian monarchy, and those of the satraps, are of the following denominations and weights:—

	Gr. troy.
Piece of three sigli	253.5
Piece of two sigli	169
Siglos	84.5

The only denomination of which we know the name is the siglos, which as having the same type as the Daric, appears to be the oldest Persian silver coin. It is the ninetieth part of the maneh of the lighter talent, and the 5400th of that talent. The piece of three sigli is the thirtieth part of that maneh, and the 1800th of the talent. If there were any doubt as to these coins being struck upon the Babylonian standard, it would be removed in the next part of our inquiry, in which we shall show that the relation of gold and silver occasioned these divisions.

2. The Euboic talent, though bearing a Greek name, is rightly held to have been originally an Eastern system. As it was used to weigh the gold sent as tribute to the king of Persia, we may infer that it was the standard of the Persian gold money; and it is reasonable to suppose that the coinage of Euboea was upon its standard. If our result as to the talent, when tested by the coins of Persia and Euboea, confirms this inference and supposition, it may be considered sound.

We must now discuss the celebrated passage of Herodotus on the tribute of the Persian satrapies. He there states that the Babylonian talent contained 70 Euboic minae (iii. 89). He specifies the amount of silver paid in Babylonian talents by each province, and then gives the sum of the silver according to the Euboic standard, reduces the gold paid to its equivalent in silver, reckoning the former at

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thirteen times the value of the latter, and lastly gives the sum total. His statements may be thus tabulated:—

Sum of items, silver.	Equivalent in E. T. at 70 minae=B. T.	Equivalent stated.	Difference.
1740 B. T.	= 9030 E. T.	9540 E. T.	+ 510
Gold tribute. 360 E. T.	Equivalent at 13 to 1. 4680 E. T.	Id.	
Total . . .	13,710 E. T.	14,220	
Total stated	14,560	14,560	
Difference .	+ 850	+ 340.	

It is impossible to explain this double error in any satisfactory manner. It is, however, evident that in the time of Herodotus there was some such relation between the Babylonian and Euboic talents as that of 11.66 to 10. This is so near 12 to 10 that it may be inquired whether ancient writers speak of any relative value of gold to silver about this time that would make talents in this proportion easy for exchange, and whether, if such a proportion is stated, it is confirmed by the Persian coins. The relative value of 13 to 1, stated by Herodotus, is very nearly 12 to 1, and seems as though it had been the result of some change, such as might have been occasioned by the exhaustion of the surface-gold in Asia Minor, or a more careful working of the Greek silver-mines. The relative value 12 to 1 is mentioned by Plato (*Hipparch.*). About Plato's time the relation was, however, 10 to 1. He is therefore speaking of an earlier period. Supposing that the proportion of the Babylonian and Euboic talents was 12 to 10, and that it was based upon a relative value of 12 to 1, what light do the Persian coins throw upon the theory? If we take the chief or only Persian gold coin, the Daric, assuming its weight to be 129 grs., and multiply it by 12, we obtain the product 1548. If we divide this product as follows, we obtain as aliquot parts the weights of all the principal and heavier Persian silver coins:—

$$\begin{aligned}
 1548 \div 6 &= 258 \text{ three sigli.} \\
 &\div 9 = 172 \text{ two sigli.} \\
 &\div 18 = 86 \text{ sigli.}
 \end{aligned}$$

On these grounds we may suppose that the Euboic talent was to the Babylonian as 60 to 72, or 5 to 6. Taking the Babylonian maneh at 7992 grs., we obtain 399,600 for the Euboic talent.

This result is most remarkably confirmed by an ancient bronze weight in the form of a lion discovered at Abydos in the Troad, and bearing in Phoenician characters the following inscription:

אספרן לקבל סתריא זי כספא, "Approved," or "found correct, on the part of the satrap who is appointed over the silver," or "money." It weighs 396,000 grs., and is supposed to have lost one or two pounds weight. It has been thought to be a weight of 50 Babylonian minae, but it is most unlikely that there should have been such a division of the talent, and still more that a weight should have been made of that division without any distinctive inscription. If, however, the Euboic talent was to the Babylonian in the proportion of 5 to 6, 50 Babylonian minae would correspond to a Euboic talent, and this weight would be a talent of that standard. We have calculated the Euboic talent at 399,600 grs., this weight is 396,000, or

* Since this was written we have ascertained that M. de Voglié has supposed this lion to be a Euboic talent

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3600 deficient, but this is explained by the supposed loss of one (5760) or two (11,520) pounds weight.*

We have now to test our result by the Persian gold money, and the coins of Euboea.

The principal, if not the only, Persian gold coin is the Daric, weighing about 129 grs. This, we have seen, was the standard coin, according to which the silver money was adjusted. Its double in actual weight is found in the silver coinage, but its equivalent is wanting, as though for the sake of distinction. The double is the thirtieth of the maneh of the lighter or monetary Babylonian talent, of which the Daric is the sixtieth, the latter being, in our opinion, a known division. The weight of the sixtieth is, it should be observed, about 133.2 grs., somewhat in excess of the weight of the Daric, but ancient coins are always struck below their nominal weight. The Daric was thus the 3600th part of the Babylonian talent. It is nowhere stated how the Euboic talent was divided, but if we suppose it to have contained 50 minae, then the Daric would have been the sixtieth of the mina, but if 100 minae, the thirtieth. In any case it would have been the 3000th part of the talent. As the 6000th was the chief division of the Aeginetan and Attic monetary talents, and the 3000th, of the Hebrew talent according to which the sacred tribute was paid, and as an Egyptian talent contained 6000 such units, no other principal division of the chief talents, save that of the Babylonian into 3600, being known, this is exactly what we should expect.

The coinage of Euboea has hitherto been the great obstacle to the discovery of the Euboic talent. For the present we speak only of the silver coins, for the only gold coin we know is later than the earliest notices of the talent, and it must therefore have been in Greece originally, as far as money was concerned, a silver talent. The coins give the following denominations, of which we state the average highest weights and the assumed true weights, compared with the assumed true weights of the coins of Athens:—

COINS OF EUBOEIA.		COINS OF ATHENS.
Highest weight.	Assumed true weight.	Assumed true weight.
	258	Tetradrachm 270
121	129	Didrachm 135
85	86	
63	64.5	Drachm 67.5
43	43	Tetrobolon 45

It must be remarked that the first Euboic denomination is known to us only from two very early coins of Eretria, in the British Museum, which may possibly be Attic, struck during a time of Athenian supremacy, for they are of about the weight of very heavy Attic tetradrachms.

It will be perceived that though the weights of all denominations, except the third in the Euboic list, are very near the Attic, the system of division is evidently different. The third Euboic denomination is identical with the Persian siglos, and indicates the Persian origin of the system. The second piece is, however, identical with the Daric. It would seem that the Persian gold and silver systems of division were here combined; and this might perfectly have been done, as the Daric, though a division of the gold talent, is also a division of the

(*Revue Archéologique*, n. s. Jan. 1862). See also *Archæological Journal*, 1860, Sept. pp. 199, 200.

silver talent. As we have noticed, the Daric is omitted in the Persian silver coinage for some special reason. The relation of the Persian and Greek systems may be thus stated :

Persian silver, Babylonian.	Persian gold, Euboïc.	Greek Euboïc. Actual weight.	Assumed.
253·5			258
169			
	129	121	129
84·5		85	86
		63	64·5
		43	43

The standard weights of Persian silver coins are here assumed from the highest average weight of the siglos. We hold that the coins of Corinth probably follow the Euboïc system.

The only gold coin of Eubœa known to us has the extraordinary weight of 49·4 grs. It is of Carystus, and probably in date a little before Alexander's time. It may be upon a system for gold money derived from the Euboïc, exactly as the Euboïc was derived from the Babylonian, but it is not safe to reason upon a single coin.

3. The talents of Egypt have hitherto formed a most unsatisfactory subject. We commence our inquiry by stating all certain data.

The gold and silver coins of the Ptolemies follow the same standard as the silver coins of the kings of Macedon to Philip II. inclusive, which are on the full Aeginetan weight. The copper coins have been thought to follow the same standard, but this is an error.

The ancient Egyptians are known to have had two weights, the MeN or UTeN, containing ten smaller weights bearing the name KeT, as M. Chabas has proved. The former name, if rightly read MeN, is a maneh or mina, the latter, according to the Copts, was a drachm or didrachm (ΚΙΤ : ΚΙΤΕ, ΚΚΙΤΕ S. drachma, didrachma, the last form not being known to have the second signification). A weight, inscribed "Five KeT," and weighing 698 grs., has been discovered. It probably originally weighed about 700 (*Revue Archéologique*, n. s.). We can thus determine the KeT to have weighed about 140 grs., and the MeN or UTeN about 1400. An examination of the copper coins of the Ptolemies has led us to the interesting discovery that they follow this standard and system. The following are all the heavier denominations of the copper coins of the earlier Ptolemies, and the corresponding weights: the coins vary much in weight, but they clearly indicate their standard and their denominations:—

EGYPTIAN COPPER COINS, AND WEIGHTS.

Coins.	Weights.
A cir. 1400.	MeN, or UTeN (Maneh?)
B cir. 700.	5 KeT.
C cir. 280.	(2 KeT).
D cir. 140.	KeT.
E cir. 70.	(½ KeT).

We must therefore conclude that the gold and silver standard of the Ptolemies was different from the copper standard, the latter being that of the ancient Egyptians. The two talents, if calculated from the coins, which in the gold and silver are below the full weight, are in the proportion of about 10 (gold and silver) to 13 (copper); or, if calculated from the higher correct standard of the

gold and silver system, in the proportion of about 10 to 12·7: we shall speak as to the exchange in a later place (§ III.).

It may be observed that the difficulty of explaining the statements of ancient writers as to the Egyptian, Alexandrian, or Ptolemaic talent or talents, probably arises from the use of two systems which could be easily confounded, at least in their lower divisions.

4. The Carthaginian talent may not be as old as the period before Alexander, to which we limit our inquiry, yet it reaches so nearly to that period that it cannot be here omitted. Those silver coins of the Carthaginians which do not follow the Attic standard seem to be struck upon the standard of the Persian coins, the Babylonian talent. The only clue we have, however, to the system is afforded by a bronze weight inscribed מנה לרשם, and weighing 321 grammes = 4956·5 grs. (Dr. Levy in *Zeitschrift Deutsch. morgenl. Gesellsch.* xiv. p. 710). This sum is divisible by the weights of all the chief Carthaginian silver coins, except the "deca-drachm," but only as sevenths, a system of division we do not know to have obtained in any ancient talent. The Carthaginian gold coins seem also to be divisions of this mina on a different principle.

III. *The Hebrew talent or talents and divisions.*—The data we have obtained enable us to examine the statements respecting the Hebrew weights with some expectation of determining this difficult question. The evidence may be thus stated.

1. A talent of silver is mentioned in Exodus, which contained 3000 shekels, distinguished as "the holy shekel," or "shekel of the sanctuary." The number of Israelite men who paid the ransom of half a shekel a-piece was 603,550, and the sum paid was 100 talents and 1775 shekels of silver (Ex. xxx. 13, 15, xxxviii. 25-28), whence we easily discover that the talent of silver contained 3000 shekels ($603,550 \div 2 = 301,775$ shekels— $1775 = 300,000 \div 100$ talents = 3000 shekels to the talent).

2. A gold maneh is spoken of, and, in a parallel passage, shekels are mentioned, three manehs being represented by 300 shekels, a maneh therefore containing 100 shekels of gold.

3. Josephus states that the Hebrew talent of gold contained 100 minae (λυχνία ἐκ χρυσοῦ... σταθμὸν ἔχουσα μνᾶς ἑκατὸν, ἃς Ἑβραῖοι μὲν καλοῦσι κίγχαρες, εἰς δὲ τὴν Ἑλληνικὴν μεταβαλλόμενον γλῶσσαν σημαίνει τάλαντον. *Ant.* iii. 6, §7).

4. Josephus states that the Hebrew mina of gold was equal to two librae and a half (δοκὸν ὀλοσφυρήλατον χρυσῆν, ἐκ μνῶν τριακοσίων πεποιημένην. ἢ δὲ μνᾶ παρ' ἡμῖν ἰσχύει λίτρας δύο καὶ ἡμισυ. *Ant.* xiv. 7, §1). Taking the Roman pound at 5050 grs., the maneh of gold would weigh about 12,625 grs.

5. Epiphanius estimates the Hebrew talent at 125 Roman pounds, which, at the value given above, are equal to about 631,250 grs.

6. A difficult passage in Ezekiel seems to speak of a maneh of 50 or 60 shekels: "And the shekel [shall be] twenty gerahs: twenty shekels, five and twenty shekels, fifteen shekels, shall be your maneh" (xlv. 12). The ordinary text of the LXX. gives a series of small sums as the Hebrew, though differing in the numbers, but the Alex. and Vat. MSS. have 50 for 15 (εἴκοσι ὀβολοὶ, πέντε σίκλοι, πέντε καὶ σίκλοι δέκα, καὶ πενήκοντα σίκλοι ἢ μνᾶ ἔσται ὑμῶν). The meaning would be, either that

there were to be three manehs, respectively containing 20, 25, and 15 shekels, or the like, or else that a sum is intended by these numbers $(20+25+15)=60$, or possibly 50. But it must be remembered that this is a prophetic passage.

7. Josephus makes the gold shekel a Daric (*Ant.* iii. 8, §10).

From these data it may be reasonably inferred, (1.) that the Hebrew gold talent contained 100 manehs, each of which again contained 100 shekels of gold, and, basing the calculation on the stated value of the maneh, weighed about 1,262,500 grs., or, basing the calculation on the correspondence of the gold shekel to the Daric, weighed about 1,290,000 grs. ($129 \times 100 \times 100$), the latter being probably nearer the true value, as the $2\frac{1}{2}$ librae may be supposed to be a round sum, and (2.) that the silver talent contained 3000 shekels, and is probably the talent spoken of by Epiphanius as equal to 125 Roman pounds, or 631,250 grs., which would give a shekel of 210.4 grs. It is to be observed that, taking the estimate of Josephus as the basis for calculating the maneh of the former talent, and that of Epiphanius for calculating the latter, their relation is exactly 2 to 1, 50 manehs at $2\frac{1}{2}$ pounds, making 125 pounds. It is therefore reasonable to suppose that two talents of the same system are referred to, and that the gold talent was exactly double the silver talent.

Let us now examine the Jewish coins.

1. The shekels and half-shekels of silver, if we take an average of the heavier specimens of the Maccabean issue, give the weight of the former as about 220 grs. A talent of 3000 such shekels would weigh about 660,000 grs. This result agrees very nearly with the weight of the talent given by Epiphanius.

2. The copper coins are generally without any indications of value. The two heaviest denominations of the Maccabean issue, however, bear the names "half" (חצי), and "quarter" (רביע). M. de Saulcy gives the weights of three "halves" as, respectively, 251.6 grs. (16.3 grammes), 236.2 (15.3), and 219.2 (14.2). In Mr. Wigan's collection are two "quarters," weighing, respectively, 145.2 grs. and 118.9 grs.; the former being, apparently, the one "quarter" of which M. de Saulcy gives the weight as 142. (9.2 grammes). We are unable to add the weights of any more specimens. There is a smaller coin of the same period, which has an average weight, according to M. de Saulcy, of 81.8 grs. (5.3 grammes). If this be the third of the "half," it would give the weight of the latter at 245.4 grs. As this may be thought to be slender evidence, especially so far as the larger coins are concerned, it is important to observe that it is confirmed by the later coins. From the copper coins mentioned above, we can draw up the following scheme, comparing them with the silver coins.

COPPER COINS.		SILVER COINS.	
Average weight.	Supposed weight.	Average weight.	Supposed weight.
Half . 235.4	250	Shekel . . . 220	Id.
Quarter 132.0	125	Half shekel 110	Id.
(Sixth). 81.8	83.3	[Third] . . . 73.3	

It is evident from this list that the copper "half" and "quarter" are half and quarter shekels, and are nearly in the relation to the silver like denominations of 2 to 1. But this relation is not exact, and it is therefore necessary to ascertain further, whether the standard of the silver talent can be

raised, if not, whether the gold talent can be more than twice the weight of the silver, and, should this explanation be impossible, whether there is any ground for supposing a third talent with a shekel heavier than two shekels of the silver.

The silver shekel of 220 grs., gives a talent of 660,000 grs.: this is the same as the Aeginetan, which appears to be of Phoenician origin. There is no evidence of its ever having had a higher shekel or didrachm.

The double talent of 1,320,000 grs., gives a Daric of 132 grs., which is only 1 gr. and a small fraction below the standard obtained from the Babylonian talent.

The possibility of a separate talent for copper depends upon the relations of the three metals.

The relation of gold to silver in the time of Herodotus was 1 : 13. The early relation upon which the systems of weights and coins used by the Persian state were founded was 1 : 12. Under the Ptolemies it was 1 : 12.5. The two Hebrew talents, if that of gold were exactly double that of silver, would have been easy for exchange in the relation of 1 : 12, 1 talent of gold corresponding to 24 talents of silver. The relation of silver to copper can be best conjectured from the Ptolemaic system. If the Hebrews derived this relation from any neighbouring state, Egypt is as likely to have influenced them as Syria; for the silver coinage of Egypt was essentially the same as that of the Hebrews, and that of Syria was different. Besides, the relation of silver and copper must have been very nearly the same in Syria and Palestine as in Egypt during the period in which the Jewish coinage had its origin, on account of the large commerce between those countries. It has, we venture to think, been satisfactorily shown by Letronne that the relation of silver to copper under the Ptolemies was 1 : 60, a mina of silver corresponding to a talent of copper. It has, however, been supposed that the drachm of copper was of the same weight as that of gold and silver, an opinion which we have proved to be incorrect in an earlier part of this article (§II. 3). An important question now arises. Is the talent of copper, when spoken of in relation to that of silver, a talent of weight or a talent of account?—in other words, Is it of 6000 actual drachms of 140 grs. each, or of 6000 drachms of account of about 110 grs. or a little less? This question seems to be answered in favour of the former of the two replies by the facts, (1) that the copper coins being struck upon the old Egyptian weight, it is incredible that so politic a prince as the first Ptolemy should have introduced a double system of reckoning, which would have given offence and occasioned confusion; (2) that the ancient Egyptian name of the monetary unit became that of the drachm, as is shown by its being retained with the sense drachm and didrachm by the Copts (§II. 3); and had there been two didrachms of copper, that on the Egyptian system would probably have retained the native name. We are of opinion, therefore, that the Egyptian copper talent was of 6000 copper drachms of the weight of 140 grs. each. But this solution still leaves a difficulty. We know that the relation of silver to copper was 1 : 60 in drachms, though 1 : 78 or 80 in weight. In a modern state the actual relation would force itself into the position of the official relation, and 1 : 60 would become 1 : 78 or 80; but this was not necessarily the case in an ancient country in so peculiar a condition as Egypt. Alexandria and a

few other towns were Greek, the rest of the country purely Egyptian; and it is quite possible that, while the gold and silver coinage was current in the Greek towns, the Egyptians may have refused to take anything but copper on their own standard. The issue of copper coins above their value would have been a sacrifice to the exchequer, if given in exchange for gold or silver, rough or coined; but they might have been exclusively paid out for salaries and small expenditure, and would have given an enormous profit to the government, if repaid in small taxes. Supposing that a village paid a silver mina in taxes collected from small proprietors, if they had only copper the government would receive in excess 180,000 grs., or not much less than a fifth of the whole amount. No one who is conversant with the East in the present day will deny the possibility of such a state of things in Egypt under the Ptolemies. Our decision may be aided by the results of the two theories upon the relations of the metals.

$$\begin{array}{l} \text{Nominal relation } A 1 = A 12 \cdot 5 = \text{Æ } 60 \\ \text{(Stater) (Mina) (Talent)} \\ A 1 = \text{Æ } 750 \end{array}$$

$$\begin{array}{l} \text{Relation in weight } A 1 = A 12 \cdot 5 = \text{Æ } \begin{cases} 78 \\ 80 \end{cases} \\ A 1 = \text{Æ } \begin{cases} 975 \\ 1000 \end{cases} \end{array}$$

It must be remembered that, in endeavouring to determine which of these two relations is the correct one, we must be guided by the evidence of antiquity, not by the mathematical proportions of the results, for we are now not dealing with coins, but with relations only originally in direct connection with systems of coinage.

Letronne gives the relation of silver to copper among the Romans, at the end of the Third Punic War, as 1:112, reduced from 1:83·3, both much higher values of the former metal than 1:60. It is therefore reasonable to suppose that the relation of 1:80 is that which prevailed in Egypt under the Ptolemies, and so at the time at which the first Jewish coins were struck, that of Simon the Maccabee.

We may therefore suppose that the Hebrew talents of silver and copper were exchangeable in the proportion of about 1:80, and, as we have seen that the coins show that their shekels were of the relative weight 1:2+, we may take as the basis of our computation the supposition that 50 shekels of silver were equal to a talent of copper, or 100 = 1 talent double the former. We prefer the former relation as that of the Egyptian system.

$$220 \times 50 = 11,000 \text{ grs.}$$

$\times 60 = 660,000$	$\div 1500 = 440$	$\div 2 = 220$
$\times 70 = 770,000$	$513 \cdot 3$	$256 \cdot 6$
$\times 72 = 792,000$	528	264
$\times 75 = 825,000$	550	275
$\times 80 = 880,000$	$586 \cdot 6$	$293 \cdot 3$

Of these results, the first is too low, and the fourth and fifth too high, the second and third agreeing with our approximative estimate of the shekel and half-shekel of copper. It is, however, possible that the fourth result may be the true one, as some coins give very nearly this standard. Which is the right system can only be inferred from the effect on the exchange, although it must be remembered that very awkward exchanges of silver and copper may have obtained wherever copper was not an important metal. Thus at Athens 8 pieces of brass went to the obolus, and 7 lepta to the piece of brass. The former relation would be easy

of comparison, the latter very inconvenient. Among the Jews, the copper coinage was of more importance: at first of accurate fabric and not very varying weight, afterwards the only coinage. Its relation to the silver money, and afterwards to the Egyptian and Phoenician currency of the same weight, must therefore have been correct. On this ground, we should prefer the relation of silver to copper 1:72, giving a talent of 792,000 grs. or nearly twice the Euboic. The agreement is remarkable, but may be fortuitous.

Our theory of the Hebrew coinage would be as follows:—

- Gold... Shekel or Daric (foreign) 129 grs.
- Silver... Shekel 220, Half-shekel 110.
- Copper. Half (-shekel) 264, Quarter (-shekel) 132, (Sixth-shekel) 88.

We can now consider the weights.

The gold talent contained 100 manehs, and 10,000 shekels.

The silver talent contained 3000 shekels, 6000 bekas, and 60,000 gerahs.

The copper talent probably contained 1500 shekels.

The "holy shekel," or "shekel of the sanctuary" (שֶׁקֶל הַקֹּדֶשׁ), is spoken of both of the gold (Ex. xxxviii. 24) and silver (25) talents of the time of the Exodus. We also read of "the king's weight" (אֵבֶן הַמֶּלֶךְ, 2 Sam. xiv. 26). But there is no reason for supposing different systems to be meant.

The significations of the names of the Hebrew weights must be here stated.

The talent (פֶּפֶר) means "a circle," or "globe," probably "an aggregate sum."

The shekel (שֶׁקֶל) signifies simply "a weight."

The beka (בֶּקַע) or half-shekel, signifies "a division," or "half."

The "quarter-shekel" (רִבְעֵ שֶׁקֶל) is once mentioned (1 Sam. ix. 8).

The gerah (גֵּרָה) signifies "a grain," or "bean."

IV. *The history and relations of the principal ancient talents.*—It is necessary to add a view of the history and relations of the talents we have discussed in order to show what light our theories throw upon these matters. The inquiry must be prefaced by a list of the talents:—

A. EASTERN TALENTS.

Hebrew gold.	1,320,000	Hebrew silver	660,000
Babylonian (silver)	959,040	Babylonian lesser (silver)	479,520
Egyptian	840,000	Persian gold	399,600
Hebrew copper?	792,000?		

B. GREEK TALENTS.

Aeginetan	660,000
Attic Commercial	598,800
Attic Commercial, lowered	558,900
Attic Solonian, double	860,520
Attic Solonian, ordinary	430,260
Attic Solonian, lowered	405,000
Euboic	387,000+

We omit the talent of the coins of Aegina, as a mere monetary variety of the Aeginetan, through the Attic Commercial.

We take the Hebrew to be the oldest system of weight. Apart from the evidence from its relation to the other systems, this may be almost proved by our finding it to obtain in Greece, in Phoenicia, and

in Judaea, as the oldest Greek and Phoenician system, and as the Jewish system. As the Jewish system, it must have been of far greater antiquity than the date of the earliest coin struck upon it. The weight according to which the ransom was first paid must have been retained as the fixed legal standard. It may seem surprising, when we remember the general tendency of money to depreciate, of which such instances as those of the Athenian silver and the English gold will occur to the reader, that this system should have been preserved, by any but the Hebrews, at its full weight, from the time of the Exodus to that of the earliest Greek coins upon the Aeginetan standard, a period probably of not much less than a thousand years; but we may cite the case of the solidus of the Roman and Byzantine emperors, which retained its weight from its origination under Constantine the Great until the fall of Constantinople, and its purity from the time of Constantine until that of Alexius Comnenus; and again the long celebrity of the sequin of Venice and the florin of Florence for their exact weight. It must be remembered, moreover, that in Phoenicia, and originally in Greece, this system was that of the great trading nation of antiquity, who would have had the same interest as the Venetians and Florentines in maintaining the full monetary standard. There is a remarkable evidence in favour of the antiquity of this weight in the circumstance that, after it had been depreciated in the coins of the kings and cities of Macedon, it was restored in the silver money of Philip II. to its full monetary standard.

The Hebrew system had two talents for the precious metals in the relation of 2 : 1. The gold talent, apparently not used elsewhere, contained 100 manehs, each of which contained again 100 shekels, there being thus 10,000 of these units, weighing about 132 grs. each, in the talent.

The silver talent, also known as the Aeginetan, contained 3000 shekels, weighing about 220 grs. each. One gold talent appears to have been equal to 24 of these. The reason for making the talent of gold twice that of silver was probably merely for the sake of distinction.

The Babylonian talent, like the Hebrew, consisted of two systems, in the relation of 2 to 1, upon one standard. It appears to have been formed from the Hebrew by reducing the number of units from 10,000 to 7200. The system was altered by the maneh being raised so as to contain 120 instead of 100 units, and the talent lowered so as to contain 60 instead of 100 manehs. It is possible that this talent was originally of silver, as the exchange, in their common unit, with the Hebrew gold, in the relation of 1 : 12, would be easy, 6 units of the gold talent passing for 72 of the silver, so that 10 gold units would be equal to a silver maneh, which may explain the reason of the change in the division of the talent.

The derivation, from the lighter Babylonian talent, of the Euboïc talent, is easily ascertained. Their relation is that of 6 : 5, so that the whole talents could be readily exchanged in the relation of 12 : 1; and the units being common, their exchange would be even more easy.

The Egyptian talent cannot be traced to any other. Either it is an independent system, or, perhaps, it is the oldest talent and parent of the rest. The Hebrew copper talent is equally obscure. Perhaps it is the double of the Persian gold talent.

The Aeginetan talent, as we have seen, was the same as the lesser or silver Hebrew talent. Its introduction into Greece was doubtless due to the Phoenicians. The Attic Commercial was a degradation of this talent, and was itself further degraded to form the Attic Solonian. The Aeginetan talent thus had five successive standards (1, Original Aeginetan; 2, Attic Commercial; 3, Id. lowered; 4, Attic Solonian; 5, Id. lowered) in the following relations:—

I.	II.	III.	IV.	V.
6	5·44	5·	3·9	3·6
	6·		4·3	
		6·		4·3

The first change was probably simply a degradation. The second may have been due to the influence of a Graeco-Asiatic talent of Cyzicus or Phocaea, of which the stater contained about 180 grs. of gold, although weighing, through the addition of 60 grs. of silver, about 240 grs., thus implying a talent in the relation to the Aeginetan of about 5 : 6. Solon's change has been hitherto an unresolved enigma. The relation of the two Attic talents is so awkward that scarcely any division is common to them in weight, as may be inferred from the data in the table of Athenian weights that we have given. Had the heavier talent been divided into quarters, and the lighter into thirds, this would not have been the case. The reason of Solon's change is therefore to be looked for in the influence of some other talent. It has been supposed that this talent was the Euboïc, but this theory is destroyed by our discovery that the Attic standard of the oldest coins is below the weight-standard of about the time of the Peloponnesian War, and thus that the reduction of Solon did not bring the weights down to the Euboïc standard. If we look elsewhere we see that the heavier Solonian weight is almost the same in standard as the Egyptian, the didrachm of the former exceeding the unit of the latter by no more than about 3 grs. This explanation is almost proved to be the true one by the remarkable fact that the Attic Solonian talent, apparently unlike all other Greek talents, had a double talent, which would give a drachm instead of a didrachm, equivalent to the Egyptian unit. At the time of Solon nothing would be more likely than such an Egyptian influence as this explanation implies. The commercial relations of Egypt and Greece, through Naucratis, were then active; and the tradition or myth of the Egyptian origin of the Athenians was probably never stronger. The degradation of the Attic Solonian talent was no doubt effected by the influence of the Euboïc, with the standard of which its lower standard is probably identical.

The principal authorities upon this subject are:—Boeckh's *Metrologische Untersuchungen*; Mommsen's *Geschichte des Römischen Münzwesens*; and Hussey's *Ancient Weights*. Don V. Vazquez Queipo's *Essai sur les Systèmes Métriques et Monétaires des Anciens Peuples* also contains much information. The writer must express his obligations to Mr. de Salis, Mr. Vaux, and Mr. E. Wigan, and more especially to his colleagues Mr. Madden and Mr. Coxe, for valuable assistance. [R. S. P.]

II. MEASURES.

The most important topic to be discussed in connexion with the subject of the Hebrew measures is their relative and absolute value. Another topic, of secondary importance perhaps, but possessing a

independent interest of its own, demands a few prefatory remarks, viz., the origin of these measures, and their relation to those of surrounding countries. The measures of length are chiefly derived from the members of the human body, which are happily adapted to the purpose from the circumstance that they exhibit certain definite proportions relatively to each other. It is unnecessary to assume that a system founded on such a basis was the invention of any single nation: it would naturally be adopted by all in a rude state of society. Nevertheless, the particular parts of the body selected for the purpose may form more or less a connecting link between the systems of various nations. It will be observed in the sequel that the Hebrews restricted themselves to the fore-arm, to the exclusion of the foot and also of the pace, as a proper measure of length. The adoption of foreign names is also worthy of remark, as showing a probability that the measures themselves were borrowed. Hence the occurrence of words of Egyptian extraction, such as *hin* and *ephah*, and probably *ammah* (for "cubit"), inclines us to seek for the origin of the Hebrew scales both of length and capacity in that quarter. The measures of capacity, which have no such natural standard as those of length, would more probably be settled by conventional usage, and the existence of similar measures, or of a similar scale of measures in different nations, would furnish a strong probability of their having been derived from some common source. Thus the coincidence of the Hebrew bath being subdivided into 72 logs, and the Athenian *metrētēs* into 72 *xestae*, can hardly be the result of chance; and, if there further exists a correspondence between the ratios that the weights bear to the measures, there would be still further evidence of a common origin. Boeckh, who has gone fully into this subject in his *Metrologische Untersuchungen*, traces back the whole system of weights and measures prevalent among the civilized nations of antiquity to Babylon (p. 39). The scanty information we possess relative to the Hebrew weights and measures as a connected system, precludes the possibility of our assigning a definite place to it in ancient metrology. The names already referred to lead to the inference that Egypt rather than Babylonia was the quarter whence it was derived, and the identity of the Hebrew with the Athenian scales for liquids furnishes strong evidence that these had a community of origin. It is important, however, to observe in connexion with this subject, that an identity of ratios does not involve an identity of absolute quantities, a distinction which very possibly escaped the notice of early writers, who were not unnaturally led to identify the measures in their absolute values, because they held the same relative positions in the several scales.

We divide the Hebrew measures into two classes, according as they refer to length or capacity, and subdivide each of these classes into two, the former into measures of length and distance, the latter into liquid and dry measures.

1. Measures of length.

(1.) The denominations referring to length were

אָצְבַּע.

טֶפַח.

זֶרֶת.

אָמָה. This term is generally referred to a Coptic origin, being derived from a word, *mahe* or *mahi*, signifying the "fore-arm," which with the article prefixed becomes *ammahi* (Boeckh, p. 265). Gesenius, however, refers it to the Hebrew word signifying "mother," as though the fore-

derived for the most part from the *a m* and *hand*. We may notice the following four as derived from this source:—(a) The *etsba*,^a or finger's breadth, mentioned only in Jer. lii. 21. (b) The *tephach*,^b or hand breadth (Ex. xxv. 25; 1 K. vii. 26; 2 Chr. iv. 5), applied metaphorically to a short period of time in Ps. xxxix. 5. (c) The *zereth*,^c or span, the distance between the extremities of the thumb and the little finger in the extended hand (Ex. xxviii. 16; 1 Sam. xvii. 4; Ez. xliii. 13), applied generally to describe any small measure in Is. xl. 12. (d) The *ammah*,^d or cubit, the distance from the elbow to the extremity of the middle finger. This occurs very frequently in the Bible in relation to buildings, such as the Ark (Gen. vi. 15), the Tabernacle (Ex. xxvi., xxvii.), and the Temple (1 K. vi. 2; Ez. xli., xli.), as well as in relation to man's stature (1 Sam. xvii. 4; Matt. vi. 27), and other objects (Esth. v. 14; Zech. v. 2). In addition to the above we may notice:—(e) The *gomed*,^e lit. a rod, applied to Eglon's dirk (Judg. iii. 16). Its length is uncertain, but it probably fell below the cubit, with which it is identified in the A. V. (f) The *kaneh*,^f or reed (compare our word "cane"), for measuring buildings on a large scale (Ez. xl. 5-8, xli. 8, xlii. 16-19).

Little information is furnished by the Bible itself as to the relative or absolute lengths described under the above terms. With the exception of the notice that the reed equals six cubits (Ez. xl. 5), we have no intimation that the measures were combined in anything like a scale. We should, indeed, infer the reverse from the circumstance that Jeremiah speaks of "four fingers," where according to the scale, he would have said "a hand breadth;" that in the description of Goliath's height (1 Sam. xvii. 4), the expression "six cubits and a span," is used instead of "six cubits and a half;" and that Ezekiel mentions "span" and "half a cubit" in close juxtaposition (xliii. 13, 17), as though they bore no relation to each other either in the ordinary or the long cubit. That the denominations held a certain ratio to each other, arising out of the proportions of the members in the body, could hardly escape notice; but it does not follow that they were ever worked up into an artificial scale. The most important conclusion to be drawn from the Biblical notices, is to the effect that the cubit, which may be regarded as the standard measure, was of varying length, and that, in order to secure accuracy, it was necessary to define the kind of cubit intended, the result being that the other denominations, if combined in a scale, would vary in like ratio. Thus in Deut. iii. 11, the cubit is specified to be "after the cubit of a man;" in 2 Chr. iii. 3 "after the first," or rather "after the older's measure;" and in Ez. xli. 8, "a great cubit," or literally "a cubit to the joint," which is further defined in xl. 5, to be "a cubit and an hand breadth." These expressions involve one of the most knotty points of Hebrew archaeology, viz., the number and the respective lengths of the Scriptural cubits. That there was more than one cubit, is clear; but whether there were three, or only two, is not so clear. We shall have occasion to refer to this topic again

arm were in some sense the "mother of the *a m*" (*Theol. p. 110*).

זָמַד.

קִנְיָה.

That the expression קִנְיָה applies to priority of time, as well as of order, is clear from many passages, as *c. g.*, 2 K. xvii. 34; Ezr. iii. 12; Hagg. ii. 3.

for the present we shall confine ourselves to the consideration of the expressions themselves. A cubit "after the cubit of a man," implies the existence of another cubit, which was either longer or shorter than it, and from analogy it may be taken for granted that this second cubit would be the longer of the two. But what is meant by the "amnah of a man"? Is it the *cubitus* in the anatomical sense of the term, in other words, the bone of the fore-arm between the elbow and the wrist? or is it the full cubit in the ordinary sense of the term, from the elbow to the extremity of the middle finger? What, again, are we to understand by Ezekiel's expression, "cubit to the joint"? The term *atstsil*,¹ is explained by Gesenius (*Theol.* p. 144) of the *knuckles*, and not of the "armholes," as in the A. V. of Jer. xxxviii. 12, where our translators have omitted all reference to the word *yâ-déca*, which follows it. A "cubit to the knuckles" would imply the space from the elbow to the knuckles, and as this cubit exceeded by a hand-breadth the ordinary cubit, we should infer that it was contradistinguished from the cubit that reached only to the wrist. The meaning of the word is, however, contested: Hitzig gives it the sense of a *connecting wall* (*Comm. on Jer.*). Sturmius (*Sciagr.* p. 94) understands it of the *edge* of the walls, and others in the sense of a *wing* of a building (Rosenmüller, *Schol. in Jer.*). Michaelis on the other hand understands it of the *knuckles* (*Suppl.* p. 119), and so does Saalschütz (*Archäol.* ii. 165). The expressions now discussed, taken together, certainly favour the idea that the cubit of the Bible did not come up to the full length of the cubit of other countries. A further question remains to be discussed, viz., whether more than two cubits were in vogue among the Hebrews. It is generally conceded that the "former" or "older" measure of 2 Chr. iii. 3, was the Mosaic or legal cubit, and that the modern measure, the existence of which is implied in that designation, was somewhat larger. Further, the cubit "after the cubit of a man" of Deut. iii. 11, is held to be a *common* measure in contradistinction to the Mosaic one, and to have fallen below this latter in point of length. In this case, we should have three cubits—the common, the Mosaic or old measure, and the new measure. We turn to Ezekiel and find a distinction of another character, viz., a long and a short cubit. Now, it has been urged by many writers, and we think with good reason, that Ezekiel would not be likely to adopt any other than the old orthodox Mosaic standard for the measurements of his ideal temple. If so, his long cubit would be identified with the *old* measure, and his short cubit with the one "after the cubit of a man," and the new measure of 2 Chr. iii. 3 would represent a still longer cubit than Ezekiel's long one. Other explanations of the prophet's language have, however, been offered: it has been sometimes assumed that, while living in Chaldea, he and his countrymen had adopted the long Babylonian cubit (Jahn, *Archæol.* §113); but in this case his short cubit could not have belonged to the same country, inasmuch as the difference between these two amounted to only three fingers (Herod. i. 178). Again, it has been explained that his short cubit was the ordinary Chaldean measure, and the long

one the Mosaic measure (Rosenmüller, *in Ez.* xl. 5); but this is unlikely on account of the respective lengths of the Babylonian and the Mosaic cubits, to which we shall hereafter refer. Independently of these objections, we think that the passages previously discussed (Deut. iii. 11; 2 Chr. iii. 3) imply the existence of three cubits. It remains to be inquired whether from the Bible itself we can extract any information as to the length of the Mosaic or legal cubit. The notices of the height of the altar and of the height of the lavers in the Temple are of importance in this respect. In the former case three cubits is specified (Ex. xxvii. 1), with a direct prohibition against the use of steps (Ex. xx. 26); in the latter, the height of the base on which the laver was placed was three cubits (1 K. vii. 27). If we adopt the ordinary length of the cubit (say 20 inches), the heights of the altar and of the base would be 5 feet. But it would be extremely inconvenient, if not impossible, to minister at an altar, or to use a laver placed at such a height. In order to meet this difficulty without any alteration of the length of the cubit, it must be assumed¹ that an inclined plane led up to it, as was the case with the loftier altar of the Temple (*Mishn. Midd.* 3, §1, 3). But such a contrivance is contrary to the spirit of the text; and, even if suited to the altar, would be wholly needless for the lavers. Hence Saalschütz infers that the cubit did not exceed a Prussian foot, which is less than an English foot (*Archäol.* ii. 167). The other instances adduced by him are not so much to the point. The molten sea was not designed for the purpose of bathing (though this impression is conveyed by 2 Chr. iv. 6 as given in the A. V.), and therefore no conclusion can be drawn from the depth of the water in it. The height of Og, as inferred from the length of his bedstead (9 cubits, Deut. iii. 11), and the height of Goliath (6 cubits and a span, 1 Sam. xvii. 4), are not inconsistent with the idea of a cubit about 18 inches long, if credit can be given to other recorded instances of extraordinary stature (Plin. vii. 2, 16; Herod. i. 68; Josephus, *Ant.* xviii. 4, §5). At the same time the rendering of the LXX. in 1 Sam. xvii. 4, which is followed by Josephus (*Ant.* vi. 9, §1), and which reduces the number of cubits to four, suggests either an error in the Hebrew text, or a considerable increase in the length of the cubit in later times.

The foregoing examination of Biblical notices has tended to the conclusion that the cubit of early times fell far below the length usually assigned to it; but these notices are so scanty and ambiguous that this conclusion is by no means decisive. We now turn to collateral sources of information, which we will follow out as far as possible in chronological order. The earliest and most reliable testimony as to the length of the cubit is supplied by the existing specimens of old Egyptian measures. Several of these have been discovered in tombs, carrying us back at all events to 1700 B.C., while the Nilometer at Elephantine exhibits the length of the cubit in the time of the Roman emperors. No great difference is exhibited in these measures, the longest being estimated at about 21 inches, and the shortest at about 20½, or exactly 20.4729 inches (Wilkinson, *Anc. Eg.* ii. 258). They are divided into 28 digits,

wrote in ignorance of the previous directions (*Comm.* of Ex. xxvii. 1).

¹ Knobel assumes that there were steps, and that the prohibition in Ex. xx. 26 emanates from an author who

and in this respect contrast with the Mosaic cubit, which, according to Rabbinical authorities, was divided into 24 digits. There is some difficulty in reconciling this discrepancy with the almost certain fact of the derivation of the cubit from Egypt. It has been generally surmised that the Egyptian cubit was of more than one length, and that the sepulchral measures exhibit the shorter as well as the longer by special marks. Wilkinson denies the existence of more than one cubit (*Anc. Eg.* ii. 257-259), apparently on the ground that the total lengths of the measures do not materially vary. It may be conceded that the measures are intended to represent the same length, the variation being simply the result of mechanical inaccuracy; but this does not decide the question of the double cubit, which rather turns on the peculiarities of notation observable on these measures. For a full discussion of this point we must refer the reader to Thenius's essay in the *Theologische Studien und Kritiken* for 1846, pp. 297-342. Our limits will permit only a brief statement of the facts of the case, and of the views expressed in reference to them. The most perfect of the Egyptian cubit measures are those preserved in the Turin and Louvre Museums. These are unequally divided into two parts, the one on the right hand containing 15, and the other 13 digits. In the former part the digits are subdivided into aliquot parts from $\frac{1}{2}$ to $\frac{1}{16}$, reckoning from right to left. In the latter part the digits are marked on the lower edge in the Turin, and on the upper edge in the Louvre measure. In the Turin measure the three left-hand digits exceed the others in size, and have marks over them indicating either fingers or the numerals 1, 2, 3. The four left-hand digits are also marked off from the rest by a double stroke, and are further distinguished by hieroglyphic marks supposed to indicate that they are digits of the old measure. There are also special marks between the 6th and 7th, and between the 10th and 11th digits of the left-hand portion. In the Louvre cubit two digits are marked off on the lower edge by lines running in a slightly transverse direction, thus producing a greater length than is given on the upper side. It has been found that each of the three above specified digits in the Turin measure = $\frac{1}{24}$ of the whole length, less these three digits; or, to put it in another form, the four left-hand digits = $\frac{1}{6}$ of the 25 right-hand digits: also that each of the two digits in the Louvre measure = $\frac{1}{24}$ of the whole length, less these two digits; and further, that twice the left half of either measure = the whole length of the Louvre measure, less the two digits. Most writers on the subject agree in the conclusion that the measures contain a combination of two, if not three, kinds of cubit. Great difference of opinion, however, is manifested as to particulars. Thenius makes the difference between the royal and old cubits to be no more than two digits, the average length of the latter being 484.289* millimètres, or 19.066 inches, as compared with 523.524 millimètres, or 20.611 inches and 523 millimètres, or 20.591 inches, the lengths of the Turin and Louvre measures respectively. He accounts for the additional two digits as originating in the practice of placing the two fingers crossways at the end of the arm and hand used in measuring,

* The precise amount of 484.289 is obtained by taking the mean of the four following amounts:— $\frac{26}{24}$ of 523.524, the total length of the Turin measure, = 486.130; twice the left-hand division of the same measure, = 480.792;

so as to mark the spot up to which the cloth or other article has been measured. He further finds in the notation of the Turin measure, indications of a third or ordinary cubit 23 digits in length. Another explanation is that the old cubit consisted of 24 old or 25 new digits, and that its length was 462 millimètres, or 18.189 inches; and again, others put the old cubit at 24 new digits, as marked on the measures. The relative proportions of the two would be, on these several hypotheses, as 28 : 26, as 28 : 25, and as 28 : 24.

The use of more than one cubit appears to have also prevailed in Babylou, for Herodotus states that the "royal" exceeded the "moderate" cubit (*πῆχυς μέτριος*) by three digits (i. 178). The appellation "royal," if borrowed from the Babylonians, would itself imply the existence of another; but it is by no means certain that this other was the "moderate" cubit mentioned in the text. The majority of critics think that Herodotus is there speaking of the ordinary Greek cubit (Boeckh, p. 214), though the opposite view is affirmed by Grote in his notice of Boeckh's work (*Class. Mus.* i. 28). Even if the Greek cubit be understood, a further difficulty arises out of the uncertainty whether Herodotus is speaking of digits as they stood on the Greek or on the Babylonian measure. In the one case the proportions of the two would be as 8 : 7, in the other case as 9 : 8. Boeckh adopts the Babylonian digits (without good reason, we think), and estimates the Babylonian royal cubit at 234.2743 Paris lines, or 20.806 inches (p. 219). A greater length would be assigned to it according to the data furnished by M. Oppert, as stated in Rawlinson's *Herod.* i. 315; for if the cubit and foot stood in the ratio of 5 : 3, and if the latter contained 15 digits, and had a length of 315 millimètres, then the length of the ordinary cubit would be 525 millimètres, and of the royal cubit, assuming, with Mr. Grote, that the cubits in each case were Babylonian, 588 millimètres, or 23.149 inches.

Reverting to the Hebrew measures, we should be disposed to identify the *new* measure implied in 2 Chr. iii. 3 with the full Egyptian cubit; the "old" measure and Ezekiel's cubit with the lesser one, either of 26 or 24 digits; and the "cubit of a man" with the third one of which Thenius speaks. Boeckh, however, identifies the Mosaic measure with the full Egyptian cubit, and accounts for the difference in the number of digits on the hypothesis that the Hebrews substituted a division into 24 for that into 28 digits, the size of the digits being of course increased (pp. 266, 267). With regard to the Babylonian measure, it seems highly improbable that either the ordinary or the royal cubit could be identified with Ezekiel's short cubit (as Rosenmüller thinks), seeing that its length on either of the computations above offered exceeded that of the Egyptian cubit.

In the Mishnah the Mosaic cubit is defined to be one of six palms (*Celim*, 17, §10). It is termed the moderate¹ cubit, and is distinguished from a lesser cubit of five palms on the one side (*Celim*, *ib.*), and on the other side from a larger one, consisting, according to Bartenora (*in Cel.* 17, §9), of six palms and a digit. The palm consisted, accord-

the length of the 26 digits on the Louvre measure, = 486.375; and twice the left-hand division of the same = 483.860.

¹ א"ה הבינונית.

ing to Maimonides (*ibid.*), of four digits; and the digit, according to Arias Montanus (*Ant.* p. 113), of four barleycorns. This gives 144 barleycorns as the length of the cubit, which accords with the number assigned to the *cubitus justus et mediocris* of the Arabians (Boeckh, p. 246). The length of the Mosaic cubit, as computed by Thenius (after several trials with the specified number of barley-corns of middling size, placed side by side), is 214.512 Paris lines, or 19.0515 inches (*St. u. Kr.* p. 110). It seems hardly possible to arrive at any very exact conclusion by this mode of calculation. Küssenschmid estimated 144 barleycorns as equal to 238.35 Paris lines (Boeckh, p. 269), perhaps from having used larger grains than the average. The writer of the article on "Weights and Measures" in the *Penny Cyclopaedia* (xviii. 193) gives, as the result of his own experience, that 38 average grains make up 5 inches, in which case $144 = 18.947$ inches; while the length of the Arabian cubit referred to is computed at 213.058 Paris lines (Boeckh, p. 247). The Talmudists state that the Mosaic cubit was used for the edifice of the Tabernacle and Temple, and the lesser cubit for the vessels thereof.^m This was probably a fiction; for the authorities were not agreed among themselves as to the extent to which the lesser cubit was used, some of them restricting it to the golden altar, and parts of the brazen altar (*Mishnah, Cel.* 17, §10). But this distinction, fictitious as it may have been, shows that the cubits were not regarded in the light of *sacred* and *profane*, as stated in works on Hebrew archaeology. Another distinction, adopted by the Rabbinites in reference to the palm, would tend to show that they did not rigidly adhere to any definite length of cubit: for they recognised two kinds of palms, one wherein the fingers lay loosely open, which they denominated a *smiling* palm; the other wherein the fingers were closely compressed, and styled the *grieving* palm (*Carpzov, Appar.* pp. 674, 676).

The conclusions to be drawn from the foregoing considerations are not of the decisive character that we could wish. For while the collateral evidence derived from the practice of the adjacent countries and from later Jewish authorities favours the idea that the Biblical cubit varied but little from the length usually assigned to that measure, the evidence of the Bible itself is in favour of one considerably shorter. This evidence is, however, of so uncertain a character, turning on points of criticism and on brief notices, that we can hardly venture to adopt it as our standard. We accept therefore, with reservation, the estimate of Thenius, and from the cubit we estimate the absolute length of the other denominations according to the proportions existing between the members of the body, the cubit equaling two spans (compare *Ex.* xxv. 3, 10, with *Joseph. Ant.* iii. 6, §§5, 6), the span three palms, and the palm four digits.

Digit			Inches.
4	Palm		.7938
12	3	Span	3.1752
24	6	2	9.5257
144	36	12	19.0515
		6	114.3090

^m Hence they were denominated אַמָּה הַבְּנִיין "cubit of the building," and אַמָּה הַכֵּלִים "cubit of the vessels."
ⁿ The term "acre" occurs in the A. V. as the equivalent for *ma'nah* (מַעְנָה) in 1 Sam. xiv. 14, and for *ma'nah* (מַעְנָה) in Is. v. 10. The latter term also occurs

Land and area were measured either by the cubit (*Num.* xxxv. 4, 5; *Ez.* xl. 27) or by the reed (*Ez.* xlii. 20, xliii. 17, xlv. 2, xlvi. 20; *Rev.* xxi. 16). There is no indication in the Bible of the use of a square measure by the Jews.ⁿ Whenever they wished to define the size of a plot, they specified its length and breadth, even if it were a perfect square, as in *Ez.* xlvi. 16. The difficulty of defining an area by these means is experienced in the interpretation of *Num.* xxxv. 4, 5, where the suburbs of the Levitical cities are described as reaching outward from the wall of the city 1000 cubits round about, and at the same time 2000 cubits on each side from without the city. We can hardly understand these two measurements otherwise than as applying, the one to the width, the other to the external boundary of the suburb, the measurements being taken respectively perpendicular and parallel to the city walls. But in this case it is necessary to understand the words rendered "from without the city," in ver. 5, as meaning *to the exclusion of the city*, so that the length of the city wall should be added in each case to the 2000 cubits. The result would be that the size of the areas would vary, and that where the city walls were unequal in length, the sides of the suburb would be also unequal. For instance, if the city wall was 500 cubits long, then the side of the suburb would be 2500 cubits; if the city wall were 1000 cubits, then the side of the suburb would be 3000 cubits. Assuming the existence of two towns, 500 and 1000 cubits square, the area of the suburb would in the former case = 6,000,000 square cubits, and would be 24 times the size of the town; while in the latter case the suburb would be 8,000,000 square cubits, and only 8 times the size of the town. This explanation is not wholly satisfactory, on account of the disproportion of the suburbs as compared with the towns: nevertheless any other explanation only exaggerates this disproportion. Keil, in his comment on *Josh.* xiv. 4, assumes that the city wall was in all cases to be regarded as 1000 cubits long, which with the 1000 cubits outside the wall, and measured in the same direction as the wall, would make up the 2000 cubits, and would give to the side of the suburb in every case a length of 3000 cubits. The objection to this view is that there is no evidence as to an uniform length of the city walls, and that the suburb might have been more conveniently described as 3000 cubits on each side. All ambiguity would have been avoided if the size of the suburb had been decided either by absolute or relative acreage; in other words, if it were to consist in all cases of a certain fixed acreage outside the walls, or if it were made to vary in a certain ratio to the size of the town. As the text stands, neither of these methods can be deduced from it.

(2.) The measures of distance noticed in the Old Testament are the three following:—(a) The *tsa'ad*,^p or pace (*2 Sam.* vi. 13), answering generally to our yard. (b) The *Cibrath hâvets*,^p rendered in the A. V. "a little way" or "a little piece of ground" (*Gen.* xxxv. 16, xlvi. 7; *2 K.* v. 19). The expression appears to indicate some definite distance, but we are unable to state with precision what that distance was. The LXX. retains the Hebrew word

in the passage first quoted, and would with more consistency be rendered *acre* instead of "yoke." It means such an amount of land as a yoke of oxen would plough in a day. *Ma'nah* means a *furrow*.

צֵדָה. פְּבֵרַת הָאֲרֵץ

in the form *Χαβραθά*, as though it were the name of a place, adding in Gen. xlviii. 7 the words *κατὰ τὸν ἰππόδρομον*, which is thus a second translation of the expression. If a certain distance was intended by this translation, it would be either the ordinary length of a race-course, or such a distance as a horse could travel without being over-fatigued, in other words, a stage. But it probably means a locality, either a race-course itself, as in 3 Macc. iv. 11, or the space outside the town walls where the race-course was usually to be found. The LXX. gives it again in Gen. xlviii. 7 as the equivalent for Ephrath. The Syriac and Persian versions render *cibrath* by *parasang*, a well-known Persian measure, generally estimated at 30 stades (Herod. ii. 6, v. 53), or from 3½ to 4 English miles, but sometimes at a larger amount, even up to 60 stades (Strab. xi. 518). The only conclusion to be drawn from the Bible is that the *cibrath* did not exceed and probably equalled the distance between Bethlehem and Rachel's burial-place, which is traditionally identified with a spot 1½ mile north of the town. (c) The *derec yôm*,^a or *mahālac yôm*,^r a day's journey, which was the most usual method of calculating distances in travelling (Gen. xxx. 36, xxxi. 23; Ex. iii. 18, v. 3; Num. x. 33, xi. 31, xxxiii. 8; Deut. i. 2; 1 K. xix. 4; 2 K. iii. 9; Jon. iii. 3; 1 Macc. v. 24, 28, vii. 45; Tob. vi. 1), though but one instance of it occurs in the New Testament (Luke ii. 44). The distance indicated by it was naturally fluctuating according to the circumstances of the traveller or of the country through which he passed. Herodotus variously estimates it at 200 and 150 stades (iv. 101, v. 53): Marinus (*ap. Ptol.* i. 11) at 150 and 172 stades; Pausanias (x. 33, §2) at 150 stades; Strabo (i. 35) at from 250 to 300 stades; and Vegetius (*De Re Mil.* i. 11) at from 20 to 24 miles for the Roman army. The ordinary day's journey among the Jews was 30 miles; but when they travelled in companies only 10 miles: Neapolis formed the first stage out of Jerusalem, according to the former, and Beroth according to the latter computation (Lightfoot, *Exerc. in Luc.* ii. 44). It is impossible to assign any distinct length to the day's journey: Jahn's estimate of 33 miles, 172 yards, and 4 feet, is based upon the false assumption that it bore some fixed ratio to the other measures of length.

In the Apocrypha and New Testament we meet with the following additional measures:—(d) The Sabbath-day's journey,^s already discussed in a separate article. (e) The *stadion*,^t or "furlong," a Greek measure introduced into Asia subsequently to Alexander's conquest, and hence first mentioned in the Apocrypha (2 Macc. xi. 5, xii. 9, 17, 29), and subsequently in the New Testament (Luke xxiv. 13; John vi. 19, xi. 18; Rev. xiv. 20, xxi. 16). Both the name and the length of the stade were borrowed from the footrace course at Olympia. It equalled 600 Greek feet (Herod. ii. 149), or 125 Roman paces (Plin. ii. 23), or 606¾ feet of our measure. It thus falls below the furlong by 53¼ feet. The distances between Jerusalem and the places Bethany, Jamnia, and Scythopolis, are given with tolerable exactness at 15 stades (John xi. 18),

^a דֶּרֶךְ יוֹם.
^r מַהְלַךְ יוֹם.
^s σαββάτου ὁδός.
^t στάδιον.
^u ῥίσις.
^v μίλιον.
^w לֶז.
^x הַיֵּן.
^y בֵּית.

240 stades (2 Macc. xii. 9), and 600 stades (2 Macc. xii. 29). In 2 Macc. xi. 5 there is an evident error either of the author or of the text, in respect to the position of Bethsura, which is given as only 5 stades from Jerusalem. The Talmudists describe the stade under the term *rés*,^u and regarded it as equal to 625 feet and 125 paces (Carpzov, *Appar.* p. 679). (f) The Mile,^x a Roman measure, equalling 1000 Roman paces, 8 stades, and 1618 English yards [MILE].

2. Measures of capacity.

The measures of capacity for liquids were:—(a) The *log*^y (Lev. xiv. 10, &c.), the name originally signifying a "basin." (b) The *hin*,^z a name of Egyptian origin, frequently noticed in the Bible (Ex. xxix. 40, xxx. 24; Num. xv. 4, 7, 9; Ez. iv. 11, &c.). (c) The *bath*,^a the name meaning "measured," the largest of the liquid measures (1 K. vii. 26, 38; 2 Chr. ii. 10; Ezr. vii. 22; Is. v. 10). With regard to the relative values of these measures we learn nothing from the Bible, but we gather from Josephus (*Ant.* iii. 8, §3) that the bath contained 6 hins (for the bath equalled 72 *xestae* or 12 *choēs*, and the hin 2 *choēs*), and from the Rabbinites that the hin contained 12 logs (Carpzov, *Appar.* p. 685). The relative values therefore stand thus:—

Log		
12	|	Hin
72	|	6 | Bath

The dry measure contained the following denominations:—(a) The *cab*,^b mentioned only in 2 K. vi. 25, the name meaning literally *hollow* or *concave*. (b) The *omer*,^c mentioned only in Ex. xvi. 16-36. The same measure is elsewhere termed *issârôn*,^d as being the tenth part of an ephah (comp. Ex. xvi. 36), whence in the A. V. "tenth deal" (Lev. xiv. 10, xxiii. 13; Num. xv. 4, &c.). The word *omer* implies a *heap*, and secondarily a *sheaf*. (c) The *séah*,^e or "measure," this being the etymological meaning of the term, and appropriately applied to it, inasmuch as it was the ordinary measure for household purposes (Gen. xviii. 6; 1 Sam. xxv. 18; 2 K. vii. 1, 16). The Greek equivalent occurs in Matt. xiii. 33; Luke xiii. 21. The *seah* was otherwise termed *shâlîsh*,^f as being the third part of an ephah (Is. xl. 12; Ps. lxxx. 5). (d) The *ephah*,^g a word of Egyptian origin, and of frequent recurrence in the Bible (Ex. xvi. 36; Lev. v. 11, vi. 20; Num. v. 15, xxviii. 5; Judg. vi. 19; Ruth ii. 17; 1 Sam. i. 24, xvii. 17; Ez. xlv. 11, 13, 14, xlvi. 5, 7, 11, 14). (e) The *lethech*,^h or "half-homer," literally meaning what is *poured out*: it occurs only in Hos. iii. 2. (f) The *homer*, meaning *heap* (Lev. xxvii. 16; Num. xi. 32; Is. v. 10; Ez. xlv. 13). It is elsewhere termed *cor*,^k from the circular vessel in which it was measured (1 K. iv. 22, v. 11; 2 Chr. ii. 10, xxvii. 5; Ezr. vii. 22; Ez. xlv. 14). The Greek equivalent occurs in Luke xvi. 7.

The relative proportions of the dry measures are to a certain extent expressed in the names *issârôn*, meaning a tenth, and *shâlîsh*, a third. In addition we have the Biblical statement that the *omer*

^b קַב.
^c עֹמֶר.
^d עִשָּׂרוֹן.
^e סָא.
^f שְׁלִישׁ.
^g אֶפָה; σάτον.
^h לֶתֶח.
ⁱ אֵיפָה.
^j חֹמֶר.
^k קֶרַח.
^l חֹמֶר.

is the tenth part of the ephah (Ex. xvi. 36), and that the ephah was the tenth part of a homer, and corresponded to the bath in liquid measure (Ez. iv. 11). The Rabbinites supplement this by stating that the ephah contained three seahs, and the seah six cabs (Carpzov, p. 683). We are thus enabled to draw out the following scale of relative values:—

Cab	Omer	Seah	Ephah	Homer
180	100	30	10	
18	10	3		
6	3 $\frac{1}{3}$			
1 $\frac{1}{2}$				

The above scale is constructed, it will be observed, on a combination of decimal and duodecimal ratios, the former prevailing in respect to the omer, ephah, and homer, the latter in respect to the cab, seah, and ephah. In the liquid measure the duodecimal ratio alone appears, and hence there is a fair presumption that this was the original, as it was undoubtedly the most general, principle on which the scales of antiquity were framed (Boeckh, p. 38). Whether the decimal division was introduced from some other system, or whether it was the result of local usage, there is no evidence to show.

The absolute values of the liquid and dry measures form the subject of a single inquiry, inasmuch as the two scales have a measure of equal value, viz. the bath and the ephah (Ez. xlv. 11): if either of these can be fixed, the conversion of the other denominations into their respective values readily follows. Unfortunately the data for determining the value of the bath or ephah are both scanty and conflicting. Attempts have been made to deduce the value of the bath from a comparison of the dimensions and the contents of the molten sea as given in 1 K. vii. 23-26. If these particulars had been given with greater accuracy and fulness, they would have furnished a sound basis for a calculation; but, as the matter now stands, uncertainty attends every statement. The diameter is given as 10 cubits, and the circumference as 30 cubits, the diameter being stated to be "from one brim to the other." Assuming that the vessel was circular, the proportions of the diameter and circumference are not sufficiently exact for mathematical purposes, nor are we able to decide whether the diameter was measured from the internal or the external edge of the vessel. The shape of the vessel has been variously conceived to be circular and polygonal, cylindrical and hemispherical, with perpendicular and with bulging sides. The contents are given as 2000 baths in 1 K. vii. 26, and 3000 baths in 2 Chr. iv. 5, the latter being probably a corrupt text. Lastly, the length of the cubit is undefined, and hence every estimate is attended with suspicion. The conclusions drawn have been widely different, as might be expected. If it be assumed that the form of the vessel was cylindrical (as the description *prîmâ facie* seems to imply), that its clear diameter was 10 cubits of the value of 19.0515 English inches each, and that its full contents were 2000 baths, then the value of the bath would be 4.8965 gallons; for the contents of the vessel would equal 2,715,638 cubic inches, or 9,793 gallons. If, however, the statement of Josephus (*Ant.* viii. 3, §5), as to the hemispherical form of the vessel, be adopted, then the estimate would be reduced. Saigey, as quoted by Boeckh (p. 261), on this hypothesis calculates the value of the bath at

18.086 French litres, or 3.9807 English gallons. If, further, we adopt Saalschütz's view as to the length of the cubit, which he puts at 15 Dresden inches at the highest, the value of the bath will be further reduced, according to his calculation, to 10 $\frac{1}{2}$ Prussian quarts, or 2.6057 English gallons; while at his lower estimate of the cubit at 12 inches, its value would be little more than one-half of this amount (*Archäol.* ii. 171). On the other hand, if the vessel bulged, and if the diameter and circumference were measured at the neck or narrowest part of it, space might be found for 2000 or even 3000 baths of greater value than any of the above estimates. It is therefore hopeless to arrive at any satisfactory conclusion from this source. Nevertheless we think the calculations are not without their use, as furnishing a certain amount of presumptive evidence. For, setting aside the theory that the vessel bulged considerably, for which the text furnishes no evidence whatever, all the other computations agree in one point, viz. that the bath fell far below the value placed on it by Josephus, and by modern writers on Hebrew archaeology generally, according to whom the bath measures between 8 and 9 English gallons.

We turn to the statements of Josephus and other early writers. The former states that the bath equals 72 *xestæ* (*Ant.* viii. 2, §9), that the hin equals 2 Attic *choēs* (*Ib.* iii. 8, §3, 9, §4), that the seah equals 1 $\frac{1}{2}$ Italian *modii* (*Ib.* ix. 4, §5), that the cor equals 10 Attic *medimni* (*Ib.* xv. 9, §2), and that the issaron or omer equals 7 Attic *cotylæ* (*Ib.* iii. 6, §6). It may further be implied from *Ant.* ix. 4, §4, as compared with 2 K. vi. 25, that he regarded the cab as equal to 4 *xestæ*. Now, in order to reduce these statements to consistency, it must be assumed that in *Ant.* xv. 9, §2, he has confused the *medimnus* with the *metrêtês*, and in *Ant.* iii. 6, §6, the *cotylæ* with the *xestæ*. Such errors throw doubt on his other statements, and tend to the conclusion that Josephus was not really familiar with the Greek measures. This impression is supported by his apparent ignorance of the term *metrêtês*, which he should have used not only in the passage above noticed, but also in viii. 2, §9, where he would naturally have substituted it for 72 *xestæ*, assuming that these were Attic *xestæ*. Nevertheless his testimony must be taken as decisively in favour of the identity of the Hebrew bath with the Attic *metrêtês*. Jerome (*in Matt.* xiii. 33) affirms that the seah equals 1 $\frac{1}{2}$ *modii*, and (*in Ez.* xlv. 11) that the cor equals 30 *modii*,—statements that are glaringly inconsistent, inasmuch as there were 30 seahs in the cor. The statements of Epiphanius in his treatise *De Mensuris* are equally remarkable for inconsistency. He states (ii. 177) that the cor equals 30 *modii*: on this assumption the bath would equal 51 *sextarii*, but he gives only 50 (p. 178): the seah would equal 1 *modius*, but he gives 1 $\frac{1}{4}$ *modii* (p. 178), or, according to his estimate of 17 *sextarii* to the *modius*, 21 $\frac{1}{4}$ *sextarii*, though elsewhere he assigns 56 *sextarii* as its value (p. 182): the omer would be 5 $\frac{1}{10}$ *sextarii*, but he gives 7 $\frac{1}{2}$ (p. 182), implying 45 *modii* to the cor: and, lastly, the ephah is identified with the Egyptian *artabe* (p. 182), which was either 4 $\frac{1}{2}$ or 3 $\frac{1}{2}$ *modii*, according as it was in the old or the new measure, though according to his estimate of the cor it would only equal 3 *modii*. Little reliance can be placed on statements so loosely made, and the question arises whether the identification of the bath with the *metrêtês* did not arise

out of the circumstance that the two measures held the same relative position in the scales, each being subdivided into 72 parts, and, again, whether the assignment of 30 *modii* to the cor did not arise out of there being 30 seahs in it. The discrepancies can only be explained on the assumption that a wide margin was allowed for a long measure, amounting to an increase of 50 per cent. This appears to have been the case from the definitions of the seah or *σάτον* given by Hesychius, *μόδιος γέμων, ἤγουν, ἐν ἡμισυ αὐδίων Ἰταλικόν*, and again by Suidas, *μόδιον ὑπερ-πεπληρωμένον, ὡς εἶναι μόδιον ἓνα καὶ ἡμισυν*. Assuming, however, that Josephus was right in identifying the bath with the *metrétês*, its value would be, according to Boeckh's estimate of the latter (pp. 261, 278), 1993·95 Paris cubic inches, or 8·7053 English gallons, but according to the estimate of Bertheau (*Gesch.* p. 73) 1985·77 Paris cubic inches, or 8·6696 English gallons.

The Rabbinites furnish data of a different kind for calculating the value of the Hebrew measures. They estimated the log to be equal to six hen eggs, the cubic contents of which were ascertained by measuring the amount of water they displaced (Maimonides, *in Cel.* 17, §10). On this basis Thenius estimated the log at 14·088 Paris cubic inches, or ·06147 English gallon, and the bath at 1014·39 Paris cubic inches, or 4·4286 gallons (*St. u. Kr.* pp. 101, 121). Again, the log of water is said to have weighed 108 Egyptian drachmae,¹ each equalling 61 barleycorns (Maimonides, *in Peah*, 3, §6, ed. Guisius.). Thenius finds that 6588 barleycorns fill about the same space as 6 hen eggs (*St. u. Kr.* p. 112). And again, a log is said to fill a vessel 4 digits long, 4 broad, and $2\frac{7}{10}$ high (Maimonides, *in Praef. Menachoth*). This vessel would contain 21·6 cubic inches, or ·07754 gallon. The conclusion arrived at from these data would agree tolerably well with the first estimate formed on the notices of the molten sea.

As we are unable to decide between Josephus and the Rabbinites, we give a double estimate of the various denominations, adopting Bertheau's estimate of the *metrétês*:—

	(Josephus.)		(Rabbinites.)
	Gallons.		Gallons.
Homer or Cor	86·696	or	44·286
Ephah or Bath	8·6696	or	4·4286
Seah	2·8898	or	1·4762
Hin	1·4449	or	·7381
Omer	·8669	or	·4428
Cab	·4816	or	·246
Log	·1204	or	·0615

In the New Testament we have notices of the following foreign measures:—(a) The *metrétês*^m (John ii. 6; A. V. "firkin") for liquids. (b) The *choenix*ⁿ (Rev. vi. 6; A. V. "measure"), for dry goods. (c) The *xestês*,^o applied, however, not to the particular measure so named by the Greeks, but to any small vessel, such as a cup (Mark vii. 4, 8; A. V. "pot"). (d) The *modius*, similarly applied to describe any vessel of moderate dimensions (Matt. v. 15; Mark iv. 21; Luke xi. 33; A. V. "bushel"); though properly meaning a Roman measure, amounting to about a peck.

The value of the Attic *metrétês* has been already

¹ In the table the weight of the log is given as 104 drachms; but in this case the contents of the log are supposed to be wine. The relative weights of water and wine were as 27 : 26.

^m μετοητής.

^o ξίστης.

ⁿ χοῖνιξ.

stated to be 8·6696 gallons, and consequently the amount of liquid in six stone jars, containing on the average $2\frac{1}{2}$ *metrétês* each, would exceed 110 gallons (John ii. 6). Very possibly, however, the Greek term represents the Hebrew *bath*, and if the bath be taken at the lower estimate assigned to it, the amount would be reduced to about 60 gallons. Even this amount far exceeds the requirements for the purposes of legal purification, the tendency of Pharisaical refinement being to reduce the amount of water to a minimum, so that a quarter of a log would suffice for a person (Mishnah, *Yad.* 1, §1). The question is one simply of archaeological interest as illustrating the customs of the Jews, and does not affect the character of the miracle with which it is connected. The *choenix* was $\frac{1}{18}$ of an Attic *medimnus*, and contained nearly a quart. It represented the usual amount of corn for a day's food, and hence a *choenix* for a penny, or *denarius*, which usually purchased a bushel (Cic. *Verr.* iii. 81), indicated a great scarcity (Rev. vi. 6).

With regard to the use of fair measures, various precepts are expressed in the Mosaic law and other parts of the Bible (Lev. xix. 35, 36; Deut. xxv. 14, 15; Prov. xx. 10; Ez. xlv. 10), and in all probability standard measures were kept in the Temple, as was usual in the other civilized countries of antiquity (Boeckh, p. 12).

The works chiefly referred to in the present article are the following:—Boeckh, *Metrologische Untersuchungen*, 1838; *Classical Museum*, vol. i.; *Theologische Studien und Kritiken* for 1846; Mishnah, ed. Surenhusius; Wilkinson, *Ancient Egyptians*, 2 vols. 1854; Epiphanius, *Opera*, 2 vols. ed. Petavius.

[W. L. B.]

WELL.^a The difference between a well (*Béer*) and a cistern (*Bôr*) [CISTERN], consists chiefly in the use of the former word to denote a receptacle for water springing up freshly from the ground, while the latter usually denotes a reservoir for rain-water (Gen. xxvi. 19, 32; Prov. v. 15; John iv. 14).

The special necessity of a supply of water (Judg. i. 15) in a hot climate has always involved among Eastern nations questions of property of the highest importance, and sometimes given rise to serious contention. To give a name to a well denoted a right of property, and to stop or destroy one once dug was a military expedient, a mark of conquest or an encroachment on territorial right claimed or existing in its neighbourhood. Thus the well Beer-sheba was opened, and its possession attested with special formality by Abraham (Gen. xxi. 30, 31). In the hope of expelling Isaac from their neighbourhood, the Philistines stopped up the wells which had been dug in Abraham's time and called by his name, an encroachment which was stoutly resisted by the followers of Isaac (Gen. xxvi. 15-33; see also 2 K. iii. 19; 2 Chr. xxvi. 10; Burckhardt, *Notes*, ii. 185, 194, 204, 276). The Kuran notices abandoned wells as signs of desertion (Sur. xxii.). To acquire wells which they had not themselves dug, was one of the marks of favour foretold to the Hebrews on their entrance into Canaan (Deut. vi. 11). To possess one is noticed as a mark of in-

^a 1. בְּאֵר; φρεῶν: puteus; in four places "pit."
 2. בּוֹר; λάκκος; cisterna; usually "pit." [PIT.]
 3. מַעְיָן; usually "fountain." [FOUNTAIN.]
 4. מְקוֹר. [FOUNTAIN; SPRING.]

dependence (Prov. v. 15), and to abstain from the use of wells belonging to others, a disclaimer of interference with their property (Num. xx. 17, 19, xxi. 22). Similar rights of possession, actual and hereditary, exist among the Arabs of the present day. Wells, Burckhardt says, in the interior of the Desert, are exclusive property, either of a whole tribe, or of individuals whose ancestors dug the wells. If a well be the property of a tribe, the wells are pitched near it, whenever rain-water be-tents are scarce in the desert; and no other Arabs are then permitted to water their camels. But if the well belongs to an individual, he receives presents from all strange tribes who pass or encamp at the well, and refresh their camels with the water of it. The property of such a well is never alienated; and the Arabs say, that the possessor is sure to be fortunate, as all who drink of the water bestow on him their benedictions (*Notes on Bed.* i. 228, 229; comp. Num. xxi. 17, 18, and Judg. i. 15).

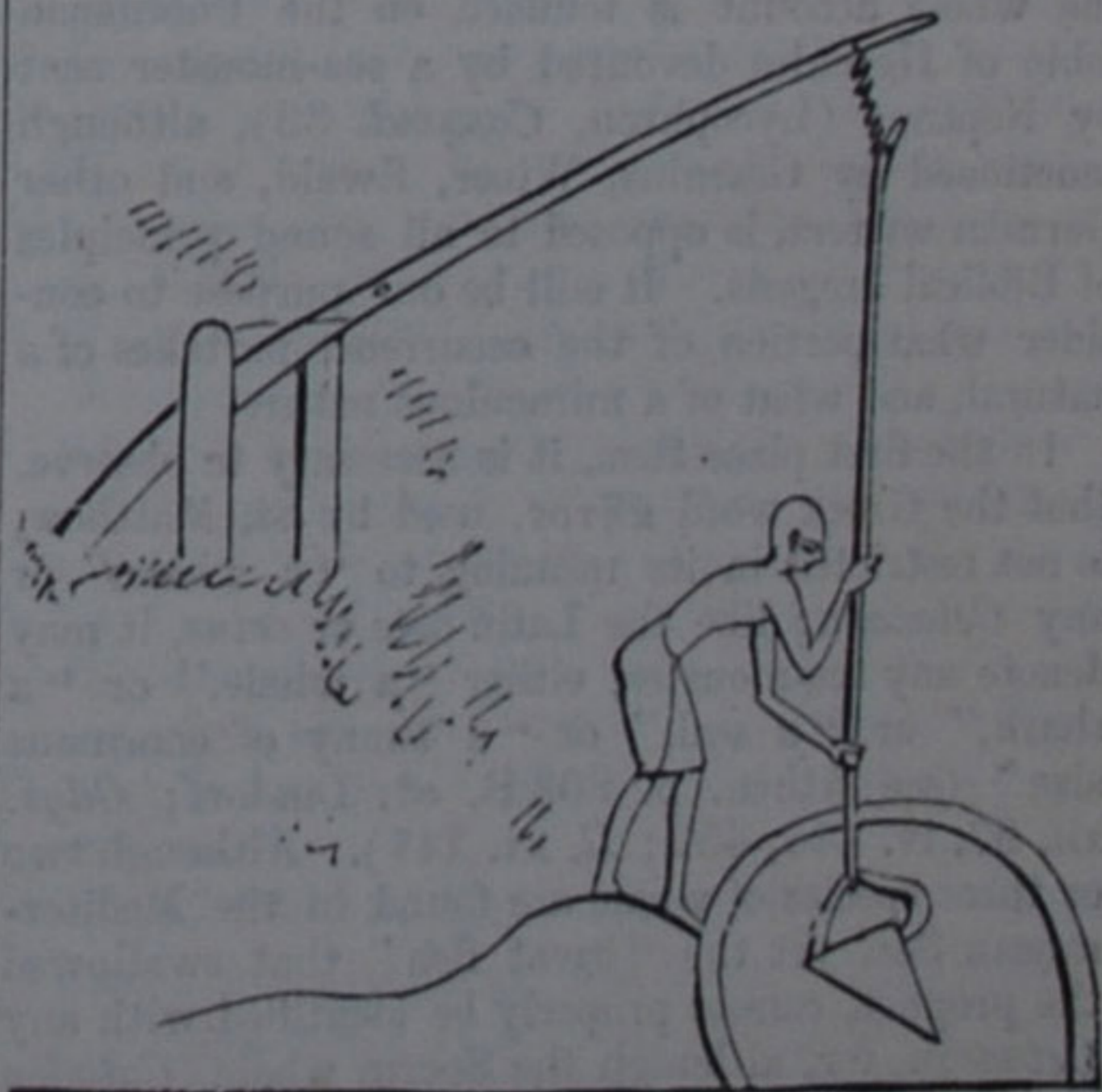
It is thus easy to understand how wells have become in many cases links in the history and landmarks in the topography both of Palestine and of the Arabian Peninsula. The well once dug in the rocky soil of Palestine might be filled with earth or stones, but with difficulty destroyed, and thus the wells of Beersheba, and the well near *Nâbulus*, called Jacob's well, are among the most undoubted witnesses of those transactions of sacred history in which they have borne, so to speak, a prominent part. On the other hand, the wells dug in the sandy soil of the Arabian valleys, easily destroyed, but easily renewed, often mark, by their ready supply, the stations at which the Hebrew pilgrims slaked their thirst, or, as at *Marah*, were disappointed by the bitterness of the water. In like manner the stations of the Mohammedan pilgrims from Cairo and Damascus to Mecca (the Hadj route) are marked by the wells (Robinson, i. 66, 69, 204, 205, ii. 283; Burckhardt, *Syria*, 318, 472, 474; App. III. 656, 660; Shaw, *Trav.* 314; Niebuhr, *Descrip. de l'Ar.*, 347, 348; Wellsted, *Trav.* ii. 40, 43, 64, 457, App.).

Wells in Palestine are usually excavated from the solid limestone rock, sometimes with steps to descend into them (Gen. xxiv. 16; Burckhardt, *Syria*, p. 232; *Col. Ch. Chron.* 1858, p. 470). The brims are furnished with a curb or low wall of stone, bearing marks of high antiquity in the furrows worn by the ropes used in drawing water (Rob. i. 204). This curb, as well as the stone cover, which is also very usual, agrees with the directions of the Law, as explained by Philo and Josephus, viz. as a protection against accident (Ex. xxi. 33; Joseph. *Ant.* iv. 8, §37; Philo, *De Spec. Leg.* iii. 27, ii. 324, ed. Mangey; Maundrell, in *E. Trav.* 435). It was on a curb of this sort that our Lord sat when He conversed with the woman of Samaria (John iv. 6), and it was this, the usual stone cover, which the woman placed on the mouth of the well at Bahurim (2 Sam. xvii. 19), where A. V. weakens the sense by omitting the article.^b Sometimes the wells are covered with cupolas raised on pillars (Burckhardt, App. V. p. 665).

The usual methods for raising water are the following:—1. The rope and bucket, or water-skin (Gen. xxiv. 14-20; John iv. 11). When the well is deep the rope is either drawn over the curb by the man or woman, who pulls it out to the distance of its full length, or by an ass or ox employed

in the same way for the same purpose. Sometimes a pulley or wheel is fixed over the well to assist the work (Robinson, i. 204, ii. 248; Niebuhr, *Descr. de l'Ar.* 137, pl. 15; *Col. Ch. Chron.* 1859, p. 350; Chardin, *Voy.* iv. 98; Wellsted, *Trav.* i. 280). 2. The sakiyeh, or Persian wheel. This consists of a vertical wheel furnished with a set of buckets or earthen jars, attached to a cord passing over the wheel, which descend empty and return full as the wheel revolves. On the axis of the wheel revolves a second wheel parallel to it, with cogs which turn a third wheel set horizontally at a sufficient height from the ground to allow the animal used in turning it to pass under. One or two cows or bulls are yoked to a pole which passes through the axis of this wheel, and as they travel round it turn the whole machine (Num. xxiv. 7; Lane, *Mod. Eg.* ii. 163; Niebuhr, *Voy.* i. 120; *Col. Ch. Chron.* 1859, p. 352; Shaw, p. 291, 408). 3. A modification of the last method, by which a man, sitting opposite to a wheel furnished with buckets, turns it by drawing with his hands one set of spokes prolonged beyond its circumference, and pushing another set from him with his feet (Niebuhr, *Voy.* i. p. 120, pl. 15; Robinson, ii. 22, iii. 89). 4. A method very common, both in ancient and modern Egypt, is the shadoof, a simple contrivance consisting of a lever moving on a pivot, which is loaded at one end with a lump of clay or some other weight, and has at the other a bowl or bucket. This is let down into the water, and, when raised, emptied into a receptacle above (Niebuhr, *Voy.* i. 120; Lane, *M. E.* ii. 163; Wilkinson, *A. E.* i. 35, 72, ii. 4).

Wells are usually furnished with troughs of wood or stone,^c into which the water is emptied for the use of persons or animals coming to the wells. In modern times an old stone sarcophagus is often used for this purpose. The bucket is very commonly of skin (Burckhardt, *Syria*, 63; Robinson, i. 204, ii. 21, 315, iii. 35, 89, 109, 134; Lord Lindsay, *Trav.* 235, 237; Wilkinson, *A. E.* i. c.; Gen. xxiv. 20; Ex. ii. 16).



Ancient Egyptian machine for raising water, identical with the shadoof of the present day. (Wilkinson.)

Unless machinery is used, which is commonly worked by men, women are usually the water-carriers. They carry home their water-jars on their heads (Lindsay, p. 236). Great contentions often occur at the wells, and they are often, among

^b הפוסה: τὸ ἐπικαλύμμα; *velamen*.

^c תבשׁוֹת; ποτιστήριον; *canalia*.

Bedouins, favourite places for attack by enemies (Ex. ii. 16, 17; Judg. v. 11; 2 Sam. xxiii. 15, 16; Burckhardt, *Syria*, p. 63; *Notes on Bel.* i. 228; *Col. Ch. Chron.* 1859, p. 473; Lane, *M. A.* i. 252; Robinson, iii. 153). [H. W. P.]

WHALE. As to the signification of the Hebrew terms *tan* (תַּן or תָּן) and *tannin* (תַּנִּינִי), variously rendered in the A. V. by "dragon," "whale," "serpent," "sea-monster," see DRAGON. It remains for us in this article to consider the transaction recorded in the Book of Jonah, of that prophet having been swallowed by some "great fish" (גָּדוֹל כְּדָוָל), which in Matt. xii. 40 is called κῆτος, rendered in our version by "whale."

Much criticism has been expended on the Scriptural account of Jonah being swallowed by a large fish; it has been variously understood as a literal transaction, as an entire fiction or an allegory, as a poetical mythus or a parable. With regard to the remarks of those writers who ground their objections upon the *denial of miracle*, it is obvious that this is not the place for discussion; the question of Jonah in the fish's belly will share the same fate as any other miracle recorded in the Old Testament.

The reader will find in Rosenmüller's *Prolegomena* several attempts by various writers to explain the Scriptural narrative, none of which, however, have anything to recommend them, unless it be in some cases the ingenuity of the authors, such as for instance that of Godfrey Less, who supposed that the "fish" was no animal at all, but a ship with the figure of a fish painted on the stern, into which Jonah was received after he had been cast out of his own vessel! Equally curious is the explanation of G. C. Anton, who endeavoured to solve the difficulty, by supposing that just as the prophet was thrown into the water, the dead carcass of some large fish floated by, into the belly of which he contrived to get, and that thus he was drifted to the shore! The opinion of Rosenmüller, that the whole account is founded on the Phœnician fable of Hercules devoured by a sea-monster sent by Neptune (Lycophron, *Cassand.* 33), although sanctioned by Gesenius, Winer, Ewald, and other German writers, is opposed to all sound principles of Biblical exegesis. It will be our purpose to consider what portion of the occurrence partakes of a natural, and what of a miraculous nature.

In the first place then, it is necessary to observe, that the Greek word κῆτος, used by St. Matthew, is not restricted in its meaning to "a whale," or any *Cetacean*; like the Latin *cete* or *cetus*, it may denote any sea-monster, either "a whale," or "a shark," or "a seal," or "a tunny of enormous size" (see Athen. p. 303 B, ed. Dindorf; *Odys.* xii. 97, iv. 446, 452; *Il.* xx. 147). Although two or three species of whale are found in the Mediterranean Sea, yet the "great fish" that swallowed the prophet, cannot properly be identified with any *Cetacean*, for, although the Sperm whale (*Catodon macrocephalus*) has a gullet sufficiently large to admit the body of a man, yet it can hardly be the fish intended; as the natural food of *Cetaceans* consists of small animals, such as medusæ and crustacea.

Nor again, can we agree with Bishop Jebb (*Sacred Literature*, pp. 178, 179), that the κοιλία of the Greek Testament denotes the back portion of a whale's mouth, in the cavity of which the prophet

was concealed; for the whole passage in Jonah is clearly opposed to such an interpretation.

The only fish, then, capable of swallowing a man would be a large specimen of the White Shark (*Carcharias vulgaris*), that dreaded enemy of sailors, and the most voracious of the family of *Squalidae*. This shark, which sometimes attains the length of thirty feet, is quite able to swallow a man whole. Some commentators are sceptical on this point. It would, however, be easy to quote passages from the writings of authors and travellers in proof of this assertion; we confine ourselves to two or three extracts. The shark "has a large gullet, and in the belly of it are sometimes found the bodies of men half eaten, sometimes whole and entire" (*Nature Displayed*, iii. p. 140). But less authority, we give a quotation from Mr. Couch's recent publication, *A History of the Fishes of the British Islands*. Speaking of white sharks, this author, who has paid much attention to the habits of fish, states that "they usually cut asunder any object of considerable size and thus swallow it; but if they find a difficulty in doing this, there is no hesitation in passing into the stomach even what is of enormous bulk; and the formation of the jaws and throat render this a matter of but little difficulty." Ruysch says that the whole body of a man in armour (*loricatus*), has been found in the stomach of a white shark; and Captain King, in his Survey of Australia, says he had caught one which could have swallowed a man with the greatest ease. Blumenbach mentions that a whole horse has been found in a shark, and Captain Basil Hall reports the taking of one in which, besides other things, he found the whole skin of a buffalo which a short time before had been thrown overboard from his ship (i. p. 27). Dr. Baird of the British Museum (*Cyclop. of Nat. Sciences*, p. 514), says that in the river Hooghly below Calcutta, he had seen a white shark swallow a bullock's head and horns entire, and he speaks also of a shark's mouth being "sufficiently wide to receive the body of a man." Wherever therefore the Tarshish, to which Jonah's ship was bound, was situated, whether in Spain, or in Cilicia or in Ceylon, it is certain that the common white shark might have been seen on the voyage. The *C. vulgaris* is not uncommon in the Mediterranean; it occurs, as Forskål (*Descript. Animal.* p. 20) assures us, in the Arabian Gulf, and is common also in the Indian Ocean. So far for the natural portion of the subject. But how Jonah could have been swallowed whole *unhurt*, or how he could have existed for any time in the shark's belly, it is impossible to explain by simply natural causes. Certainly the preservation of Jonah in a fish's belly is not more remarkable than that of the three children in the midst of Nebuchadnezzar's "burning fiery furnace."

Naturalists have recorded that sharks have the habit of throwing up again whole and alive the prey they have seized (see Couch's *Hist. of Fishes*, i. p. 33). "I have heard," says Mr. Darwin, "from Dr. Allen of Forres, that he has frequently found a Diodon floating alive and distended in the stomach of a shark; and that on several occasions he has known it eat its way out, not only through the coats of the stomach, but through the sides of the monster which has been thus killed." [W. H.]

WHEAT. The well-known valuable cereal cultivated from the earliest times, and frequently mentioned in the Bible. In the A. V. the Heb.

words *bar* (בַּר or בָּר), *dágân* (דָּגָן), *rîphôth* (רִפְּוֹת), are occasionally translated "wheat;" but there is no doubt that the proper name of this cereal, as distinguished from "barley," "spelt," &c., is *chîtâh* (חֵטָה; Chald. חֲנִטִין, *chintin*). As to the former Hebrew terms see under CORN. The first mention of wheat occurs in Gen. xxx. 14, in the account of Jacob's sojourn with Laban in Mesopotamia. Much has been written on the subject of the origin of wheat, and the question appears to be still undecided. It is said that the *Triticum vulgare* has been found wild in some parts of Persia and Siberia, apparently removed from the influence of cultivation (*English Cyclop.* art. "Triticum"). Again, from the experiments of M. Esprit Fabre of Agde it would seem that the numerous varieties of cultivated wheat are merely improved transformations of *Aegilops ovata* (*Journal of the Royal Agricult. Soc.*, No. xxxiii. p. 167-180). M. Fabre's experiments, however, have not been deemed conclusive by some botanists (see an interesting paper by the late Prof. Henfrey in No. xli. of the *Journal* quoted above). Egypt in ancient times was celebrated for the growth of its wheat; the best quality, according to Pliny (*Nat. Hist.* xviii. 7), was grown in the Thebaid; it was all bearded, and the same varieties, Sir G. Wilkinson writes (*Anc. Egypt.* ii. 39, ed. 1854), "existed in ancient as in modern times, among which may be mentioned the seven-eared quality described in Pharaoh's dream" (Gen. xli. 22). This is the so-called mummy-wheat, which, it has been said, has germinated after the lapse of thousands of years; but it is now known that the whole thing was a fraud. Babylonia was also noted for the excellence of its wheat and other cereals. "In grain," says Herodotus (i. 193), "it will yield commonly two hundred fold, and at its greatest production as much as three hundred fold. The blades of the wheat and barley-plants are often four fingers broad." But this is a great exaggeration. (See also Theophrastus, *Hist. Plant.* viii. 7.) Modern writers, as Chesney and Rich, bear testimony to the great fertility of Mesopotamia. Syria and Palestine produced wheat of fine quality and in large quantities (Ps. cxlvii. 14, lxxxii. 16, &c.). There appear to be two or three kinds of wheat at present grown in Palestine, the *Triticum vulgare* (var. *hybernum*), the *T. spelta* [see RYE], and another variety of bearded wheat which appears to be the same as the Egyptian kind, the *T. compositum*. In the parable of the sower our Lord alludes to grains of wheat which in good ground produce a hundred fold (Matt. xiii. 8). "The return of a hundred for one," says Trench, "is not unheard of in the East, though always mentioned as something extraordinary." Laborde says "there is to be found at Kerek a species of hundred wheat which justifies the text of the Bible against the charges of exaggeration of which it has been the object." The common *Triticum vulgare* will sometimes produce one hundred grains in the ear. Wheat is reaped towards the end of April, in May, and in June, according to the differences of soil and position; it was sown either broadcast, and then ploughed in or trampled under (Is. xxxii. 20), or in rows, if we rightly understand Is. xxviii. 25, which seems to imply that the seeds were planted apart in order to insure larger and fuller ears. The wheat was put into the ground in the winter, and some time after the barley; in the Egyptian plague of hail, conse-

quently, the barley suffered, but the wheat had not appeared, and so escaped injury. Wheat was ground into flour; the finest qualities were expressed by the term "fat of kidneys of wheat," חֵלֶב כְּלֵיֹת הַטָּה (Deut. xxxii. 14). Unripe ears are sometimes cut off from the stalks, roasted in an oven, mashed and boiled, and eaten by the modern Egyptians (Sonnini, *Trav.*). Rosenmüller (*Botany of the Bible*, p. 80), with good reason, conjectures that this dish, which the Arabs call *Ferik*, is the same as the *geres carmel* (גֵּרֶשׁ כַּרְמֶל) of Lev. ii. 14 and 2 K. iv. 42. The Heb. word *Kâli* (קָלִי, Lev. ii. 14) denotes, it is probable, roasted ears of corn, still used as food in the East. An "ear of corn" was called *Shibbôleth* (שִׁבְּלֶת), the word which betrayed the Ephraimites (Judg. xii. 1, 6), who were unable to give the sound of *sh*. The curious expression in Prov. xxvii. 22, "though thou shouldst bray a fool in a mortar among wheat with a pestle, yet will not his foolishness depart from him," appears to point to the custom of mixing the grains of inferior cereals with wheat; the meaning will then be, "Let a fool be ever so much in the company of wise men, yet he will continue a fool." Maurer (*Comment.* l. c.) simply explains the passage thus: "Quomocumque tractaveris stultum non patietur se emendari." [Compare articles CORN; AGRICULTURE; BARLEY.] [W. H.]

WHIRLWIND (סַעֲרָה; סוּפָה). The Hebrew terms *sûphâh* and *se'ârâh* convey the notion of a violent wind or hurricane, the former because such a wind sweeps away every object it encounters, the latter because the objects so swept away are tossed about and agitated. In addition to this, Gesenius gives a similar sense to *galgal*,^a in Ps. lxxvii. 18 (A. V. "heaven"), and Ez. x. 13 (A. V. "wheel"). Generally, however, this last term expresses one of the effects of such a storm in rolling along chaff, stubble, or such light articles (*Thes.* p. 288). It does not appear that any of the above terms express the specific notion of a whirl-wind, i. e. a gale moving violently round on its own axis—and there is no warrant for the use of the word in the A. V. of 2 K. ii. 11. The most violent winds in Palestine come from the east; and the passage in Job xxxvii. 9, which in the A. V. reads, "Out of the south cometh the whirlwind," should rather be rendered, "Out of his chamber," &c. The whirlwind is frequently used as a metaphor of violent and sweeping destruction. Cyrus' invasion of Babylonia is compared to a southerly gale coming out of the wilderness of Arabia (Is. xxi. 1; comp. Knobel, *in loc.*), the effects of which are most prejudicial in that country. Similar allusions occur in Ps. lviii. 9; Prov. i. 27, x. 25; Is. xl. 24 Dan. xi. 40. [W. L. B.]

WIDOW (אַלְמָנָה; χήρα: *vidua*). Under the Mosaic dispensation no legal provision was made for the maintenance of widows. They were left dependent partly on the affection of relations, more especially of the eldest son, whose birthright, or extra share of the property, imposed such a duty upon him, and partly on the privileges accorded to other distressed classes, such as a participation in the triennial third tithe (Deut. xiv. 29, xxvi. 12), in leasing (Deut. xxiv. 19-21), and in religious

feasts (Deut. xvi. 11, 14). In the spirit of these regulations a portion of the spoil taken in war was assigned to them (2 Macc. viii. 28, 30). A special prohibition was laid against taking a widow's garments in pledge (Deut. xxiv. 17), and this was practically extended to other necessities (Job xxiv. 3). In addition to these specific regulations, the widow was commended to the care of the community (Ex. xxii. 22; Deut. xxvii. 19; Is. i. 17; Jer. vii. 6, xxii. 3; Zech. vii. 10), and any neglect or oppression was strongly reprobated (Job xxii. 9, xxiv. 21; Ps. xciv. 6; Is. x. 2; Ez. xxii. 7; Mal. iii. 5; Eccles. xxxv. 14, 15; Bar. vi. 38; Matt. xxiii. 14). In times of danger widows were permitted to deposit their property in the treasury of the Temple (2 Macc. iii. 10). With regard to the remarriage of widows, the only restriction imposed by the Mosaic law had reference to the contingency of one being left childless, in which case the brother of the deceased husband had a right to marry the widow (Deut. xxv. 5, 6; Matt. xxii. 23-30). [MARRIAGE.] The high-priest was prohibited from marrying a widow, and in the ideal polity of the prophet Ezekiel the prohibition is extended to the ordinary priests (Ez. xliv. 22).

In the Apostolic Church the widows were sustained at the public expense, the relief being daily administered in kind, under the superintendence of officers appointed for this special purpose (Acts vi. 1-6). Particular directions are given by St. Paul as to the class of persons entitled to such public maintenance (1 Tim. v. 3-16). He would confine it to the "widow indeed" (*ἡ ὄντως χήρα*), whom he defines to be one who is left alone in the world (*μεμονωμένη*), without any relations or Christian friends responsible for her support (vers. 3-5, 16). Poverty combined with friendlessness thus formed the main criterion of eligibility for public support; but at the same time the character of the widow—her piety and trustfulness—was to be taken into account (ver. 5). Out of the body of such widows a certain number were to be enrolled (*καταλεγέσθω*; A. V. "taken into the number"), the qualifications for such enrolment being (1.) that they were not under sixty years of age; (2.) that they had been "the wife of one man," probably meaning *but once married*; and (3.) that they had led useful and charitable lives (vers. 9, 10). The object of the enrolment is by no means obvious. If we were to form our opinion solely on the qualifications above expressed, we should conclude that the enrolled widows formed an ecclesiastical order, having duties identical with or analogous to those of the deaconesses of the early Church. For why, if the object were of an eleemosynary character, should the younger or twice-married widows be excluded? The weight of modern criticism is undoubtedly in favour of the view that the enrolled widows held such an official position in the Church (Alford, De Wette, Lange, &c., in 1 Tim. v. 9, 10). But we can perceive no ground for isolating the passage relating to the enrolled widows from the context, or for distinguishing these from the "widows indeed" referred to in the preceding and succeeding verses. If the passage be read as a whole, then the impression derived from it will be that the enrolment was for an eleemosynary purpose, and that the main condition of enrolment was, as before, poverty. The very argument which has been adduced in favour of the opposite view, in reality equally favours this one; for why should unmarried or young women be excluded from an ecclesi-

astical order? The practice of the early Church proves that they were not excluded. The author of the *Apostolical Constitutions* lays down the rule that virgins should be generally, and widows only exceptionally, appointed to the office of deaconess (vi. 17, §4); and though the directions given to Timothy were frequently taken as a model for the appointment of deaconesses, yet there was great diversity of practice in this respect (Bingham's *Ant.* ii. 22, §§ 2-5). On the other hand, the restrictions contained in the Apostolic directions are not inconsistent with the eleemosynary view, if we assume, as is very possible, that the enrolled widows formed a *permanent* charge on the public funds, and enjoyed certain privileges by reason of their long previous services, while the remainder, who were younger, and might very possibly remarry, would be regarded in the light of temporary and casual recipients. But while we thus believe that the primary object of the enrolment was simply to enforce a more methodical administration of the Church funds, it is easy to understand how the order of widows would obtain a quasi-official position in the Church. Having already served a voluntary diaconate, and having exhibited their self-control by refraining from a second marriage, they would naturally be looked up to as models of piety to their sex, and would belong to the class whence deaconesses would be chiefly drawn. Hence we find the term "widow" (*χήρα*) used by early writers in an extended sense, to signify the adoption of the conditions by which widows, enrolled as such, were bound for the future. Thus Ignatius speaks of "virgins who were called widows" (*παρθένους τὰς λεγομένας χήρας*; *Ep. ad Smyrn.* 13); and Tertullian records the case of a virgin who was placed on the roll of widows (*in viduatu*) while yet under twenty years of age (*De Vel. Virg.* 9). It is a further question in what respect these virgins were called "widows." The annotations on Ignatius regard the term as strictly equivalent to "deaconess" (*Patres Apost.* ii. 4+1, ed. Jacobson), but there is evidently another sense in which it may be used, viz. as betokening *celibacy*, and such we believe to have been its meaning, inasmuch as the abstract term *χηρεία* is used in the sense of *continence, or unmarried state*, in the *Apostolical Constitutions* (*παρθένος μὴ φέρουσα τὴν ἐν νεότητι χηρείαν*; *δῶρον ἔχουσα χηρείας*, iii. 1, §§ 1, 2). We are not therefore disposed to identify the widows of the Bible either with the deaconesses or with the *πρεσβύτιδες* of the early Church, from each of which classes they are distinguished in the work last quoted (ii. 57, §8, viii. 13, §4). The order of widows (*τὸ χηρικόν*) existed as a separate institution, contemporaneously with these offices, apparently for the same eleemosynary purpose for which it was originally instituted (*Const. Apost.* iii. 1, §1, iv. 5, §1). [W. L. B.]

WIFE. [MARRIAGE.]

WILD BEASTS. [BEASTS, Appendix A.]

WILDERNESS OF THE WANDERING.

The historical magnitude of the Exodus as an event, including in that name not only the exit from Egypt, but the passage of the sea and desert, and the entry into Canaan, and the strange scenery in which it was enacted, no less than the miraculous agency sustained throughout forty years, has given to this locality an interest which is heightened, if possible, by the constant retrospect taken by the great Teacher of the New Testament and His ap-

ties, of this portion of the history of the race of Israel, as full of spiritual lessons necessary for the Christian Church throughout all ages. Hence this region, which physically is, and has probably been for three thousand years or more, little else than a barren waste, has derived a moral grandeur and obtained a reverential homage which has spread with the diffusion of Christianity. Indeed, to Christian, Jew, and Moslem it is alike holy ground. The mystery which hangs over by far the greater number of localities, assigned to events even of first-rate magnitude, rather inflames than allays the eagerness for identification; and the result has been a larger array of tourists than has probably ever penetrated any other country of equal difficulty. Burchardt, Niebuhr, Seetzen, Laborde and Linant, Ruppell, Raumer, Russegger, Lepsius, Henniker, Wellsted, Fazakerley, and Miss Martineau, are conspicuous amongst those who have contributed since the close of the last century to deepen, to vivify, and to correct our impressions, besides the earlier works of Monconys in the 17th century, and Hasselquist and Pococke in the 18th; whilst Wilson, Stewart, Bartlett, Bonar, Olin, Bertou, Robinson, and Stanley, have added a rich detail of illustration reaching to the present day. And thus it is at length "possible by the internal evidence of the country itself to lay down, not indeed the actual route of the Israelites in every stage, but in almost all cases, the main alternatives between which we must choose, and in some cases, the very spots themselves." Yet with all the material which now lies at the disposal of the topographical critic, there is often a real poverty of evidence where there seems to be an abundance; and the single lines of information do not weave up into a fabric of clear knowledge. "Hitherto no one traveller has traversed more than one, or at most two routes of the Desert, and thus the determination of these questions has been obscured; first, by the tendency of every one to make the Israelites follow his own track; and secondly, by his inability to institute a just comparison between the facilities or difficulties which attend the routes which he has not seen. This obscurity will always exist till some competent traveller has explored the whole Peninsula. When this has been fairly done, there is little doubt that some of the most important topographical questions now at issue will be set at rest" (Stanley, *S. & P.* 33).

1. The uncertainties commence from the very starting-point of the route of the Wandering. It is impossible to fix the point at which in "the wilderness of Etham" (Num. xxxiii. 6, 7) Israel, now a nation of freemen, emerged from that sea into which they had passed as a nation of slaves. But, slippery as is the physical ground for any fixture of the miracle to a particular spot, we may yet admire the grandeur and vigour of the image of baptism which Christianity has appropriated from those waters. There their freedom was won; "not of

themselves, it was the gift of God," whose Presence visibly preceded, and therefore St. Paul says, "they were baptized in the cloud," and not only "in the sea." The fact that from "Etham in the edge of the wilderness," their path struck across the sea (Ex. xiii. 20), and from the sea into the same wilderness of Etham, seems to indicate the upper end of the furthest tongue of the Gulf of Suez as the point of crossing, for here, as is probable, rather than lower down the same, the district on either side would for a short distance on both shores have the same name. There seems reason also to think that this gulf had then, as also at Ezion-Geber [EZIONGEBER], a further extension northward than at present, owing to the land having upheaved its level. This action seems to have been from early times the predominant one, and traces of it have recently been observed.^a Thus it is probable as a result of the same agency that the sea was even then shallow, and the sudden action of a tidal sea in the *cul-de-sac* of a narrow and shallow gulf is well-known. Our own Solway Firth is a familiar example of the rise and rush of water, surprising at times, especially when combined with the action of a strong wind, even those habitually cognizant of its power. Similarly by merely venturing, it seems, below high-water mark, our own King John lost his baggage, regalia, and treasures in the estuary of The Wash. Pharaoh's exclamation, "they are entangled (נִבְכָּיִם) in the land," merely expresses the perplexity in which such a multitude having, from whatever cause, no way of escape, would find themselves. "The wilderness hath shut them in," refers merely, it is probable, to his security in the belief that, having reached the flat of the waste, they were completely at the mercy of a chariot force, like his, and rather excludes than implies the notion of mountains.^c The direction of the wind is "east" in the Hebrew (בְּרוּחַ קָדִים), but in the LXX. "south" (νότοφ), in Ex. xiv. 21. On a local question the probable authority of the latter, executed in Egypt near the spot, is somewhat enhanced above its ordinary value. The furthest tongue of the gulf, now supposed dry, narrows to a strait some way below, *i. e.* south of its northern extremity, as given in Laborde's map (*Commentary on Exod.*), and then widens again.^d In such a narrow pass the action of the water would be strongest when "the sea returned," and here a wind anywhere between E. and S.S.E., to judge from that map, would produce nearly the same effect; only the more nearly due E. the more it would meet the sea at right angles.^e The probability is certainly that Pharaoh, seeing his bondmen, now all but within his clutch, yet escaping from it, would in the darkness of night, especially as he had spurned calmer counsels and remonstrances before, pursue with headlong rashness, even although, to a sober judgment guided by experience, the risk was plain.

^a See a pamphlet by Charles T. Beke, Ph.D., "A Few Words with Bishop Colenso," 4, 5.

^b Compare the use of the same word, of a multitude of men or cattle, in Joel, i. 18, to express ἐν ἀπορίᾳ εἶναι, without reference to egress or direction of course, merely for want of food.

^c Josephus (*Ant.* ii. 15, §3) speaks of the obstruction of precipitous and impassable mountains, but when we consider his extravagant language of the height of the buldings of the temple, it is likely that much more, when speaking in general terms of a spot so distant, such expressions may be set down as simply rhetorical.

^d Dr. Stanley (*S. & P.* 36) thinks that this supposed extension "depends on arguments which have not yet been thoroughly explored."

^e If the wind were direct S. it would at some points favour the notion that "the passage was not a transit but a short circuit, returning again to the Egyptian shore, and then pursuing their way round the head of the gulf," an explanation favoured "by earlier Christian commentators, and by almost all the Rabbinical writers" (*S. & P.* 36). The landing-place would on this view be considerably north of the point of entering the sea.

There is a resemblance in the names Migdol and the "ancient 'Magdolum,' twelve miles S. of Pelusium, and undoubtedly described as 'Migdol' by Jeremiah and Ezekiel" (Jer. xlv. 1, xlvi. 14; Ezek. xxix. 10, xxx. 6; *S. & P.* 37), also between the same and the modern *Mūktala*, "a gentle slope through the hills" towards Suez; and Pi-Hahiroth perhaps is 'Ajrūd. The "wilderness of Etham" probably lay on either side adjacent to the now dry trough of the northern end of the gulf. Dr. Stewart (*Tent and Khan*, 64) thinks the name Etham traceable in the *Wady Ahthi*, on the Arabian shore, but this and the preceding 'Ajrūd are of doubtful identity. The probability seems on the whole to favour the notion that the crossing lay to the N. of the *Jebel 'Atakah*, which lies on the Egyptian side S. of Suez, and therefore neither the *Ayūn Mūsa*,^f nor, much less, the *Hummām Pharaūn*, further down on the eastern shore—each of which places, as well as several others, claims in local legend to be the spot of landing—will suit. Still, these places, or either of them, may be the region where "Israel saw the Egyptians dead upon the sea-shore" (Ex. xiv. 30). The crossing place from the Egyptian *Wady Tawārik* to the 'Ayūn Mūsa has been supported, however, by Wilson, Olin, Dr. Stewart (*Tent and Khan*, 56), and others. The notion of *Mūktala* being Migdol will best suit the previous view of the more northerly passage. The "wilderness of Shur," into which the Israelites "went out" from the Red Sea, appears to be the eastern and south-eastern continuation of that of Etham, for both in Ex. xv. 22, and in Num. xxxiii. 8, they are recorded to have "gone three days in the wilderness," indicated respectively in the two passages as that of Shur and that of Etham. From the expression in Ex. xiii. 20, "Etham, the edge of the wilderness," the habitable region would seem to have ended at that place. Josephus (*Ant.* vi. 7, §3) seems to identify Pelusium with Shur, comp. 1 Sam. xv. 7; but probably, he merely uses the former term in an approximate sense, as a landmark well-known to his readers; since Shur is described as "over against, or before, Egypt" (Gen. xxv. 18), being perhaps the same as Sihor, similarly spoken of in Josh. xiii. 3; Jer. ii. 18. When so described, we may understand "Egypt" to be taken in a strict sense as excluding Goshen and the Arabian nome. [GOSHEN.] Shur "before Egypt," whatever the name may have meant, must probably be viewed as lying eastward of a line drawn from Suez to Pelusium; and the wilderness named from it or from Etham, extended three days' journey (for the Israelites) from the head of the gulf, if not more. It is evident that, viewed from Egypt, the wilderness might easily take its name from the last outpost of the habitable region, whe-

^f A warm spring, the temperature of which is given by Mr. Hamilton (*Sinai, the Hedjaz and Soudan*, 14) as being 83° Fahrenheit. "Robinson found the water here salt, and yielding a hard deposit, yet the Arabs called these springs 'sweet:' there are several of them" (Seetzen, *Reisen*, iii. pt. iii. 431). The *Hummām* ("warm baths") *Pharaūn* are similar springs, lying a little W. of S. from *Wady Useit*, on the coast close to whose edge rises the precipitous *Jebel Hummām*, so called from them, and here intercepting the path along the shore. The Rev. R. S. Tyrwhitt, who made the desert journey in February, 1863, says that there may be a warm spring out of the twelve or thirteen which form the *Ayūn Mūsa*, but that the water of the larger well is cold, and that he drank of it.

^g North of this limit lies the most southern wady which

ther town or village, whereas in other aspects it might have a name of its own, from some landmark lying in it. Thus the Egyptians may have known it as connected with Etham, and the desert inhabitants as belonging to Shur; while from his residence in Egypt and sojourn with Jethro, both names may have been familiar to Moses. However this may be, from Suez eastward, the large desert tract, stretching as far east as the Ghor and Mount Seir, *i. e.* from 32° 40' to 35° 10' E. long., begins. The 31st parallel of latitude, nearly traversing *El 'Arish*, the "River of Egypt," on the Mediterranean, and the southernmost extremity of the Dead Sea, may be taken roughly to represent its northern limit, where it really merges imperceptibly into the "south country" of Judah. It is scarcely called in Scripture by any one general name, but the "wilderness of Paran" most nearly approximates to such a designation, though lost, short of the Egyptian or western limit, in the wilderness of Shur, and perhaps, although not certainly, curtailed eastward by that of Zin. On the south side of the *et-Tih* range, a broad angular band runs across the Peninsula with its apex turned southward, and pointing towards the central block of granite mountains. This is a tract of sand known as the *Debbet er-Ramleh* or *Ramlah*, but which name is omitted in Kiepert's map. The long horizontal range and the sandy plain together form a natural feature in marked contrast with the pyramidal configuration of the southern or Sinaitic region. The "wilderness of Sinai" lies of course in that southern region, in that part which, although generally elevated, is overhung by higher peaks. How far this wilderness extended is uncertain. The Israelites only traversed the north-western region of it. The "wilderness of Sin" was their passage into it from the more pleasant district of coast Wadys with water-springs which succeeded to the first-traversed wilderness of Shur or Etham, where no water was found. Sin may probably be identified with the coast strip, now known as *el-Kāa*, reaching from a little above the *Jebel Feirān*, or as nearly as possible on the 29th parallel of latitude,^g down to and beyond *Tūr* on the Red Sea. They seem to have only dipped into the "Sin" region at its northern extremity, and to have at once moved from the coast towards the N.W. upon Sinai (Ex. xv. 22-27, xvi. 1; Num. xxxiii. 8-11). It is often impossible to assign a distinct track to this vast body—a nation swarming on the march. The fact, of many, perhaps most, of the ordinary avenues being incapable of containing more than a fraction of them, would often have compelled them to appropriate all or several of the modes of access to particular points, between the probabilities of which the judgment of travellers is balanced.^h Down the coast, however,

has been fixed upon by any considerable number of authorities for Elim, from which the departure was taken into the wilderness of Sin. Seetzen, but he alone, suggests that Elim is to be found in a warm spring in a northerly direction from *Tūr*, at a very slight distance, which waters the extensive date-palm plantations there. If this were so *Tūr* itself would have certainly been included in the radius of the camp; but it is unlikely that they went so far south.

^h It may be worth while to notice that the same observations apply to the battle in Rephidim with Amalek. To look about for a battle-field large enough to give sufficient space for two hosts worthy of representing Israel and Amalek, and to reject all sites where this possibility is not obvious, is an unsafe method of criticism.

from Etham or the Suez region southwards, the course is broad and open, and there the track would be more definite and united. Before going into the further details of this question, a glance may be taken at the general configuration of the *et-Tih* region, computed at 40 parasangs, or about 140 miles, in length, and the same in breadth by Jakût, the famous geographer of Hamah (Seetzen, *Reisen*, iii. 47). For a description of the rock desert of Sinai, in which nature has cast, as it were, a pyramid of granite, culminating at *Um Shaumer*, 9300 feet above sea-level, but cloven and sulcated in every direction by wadys into minor blocks, see SINAI.

II. The twin Gulfs of Suez and 'Akabah, into which the Red Sea separates, embrace the Peninsula on its W. and E. sides respectively. One or other of them is in sight from almost all the summits of the Sinaitic cluster, and from the highest points both branches. The eastern coast of the Gulf of Suez is strewn with shells, and with the forests of submarine vegetation which possibly gave the whole sea its Hebrew appellation of the "Sea of Weeds." The "huge trunks" of its "trees of coral may be seen even on the dry shore;" while at *Tûr*, cabins are formed of madrepores gathered from it, and the debris of conchylia lie thickly heaped on the beach.¹ Similar "coralline forests" are described (*S. and P.* 83) as marking the coast of the Gulf of 'Akabah. The northern portion of the whole Peninsula is a plateau bounded southwards by the range of *et-Tih*, which droops across it on the map with a curve somewhat like that of a slack chain, whose points of suspension are, westwards, Suez, and eastward, but further south, some "sandstone cliffs, which shut off" this region from the Gulf of 'Akabah. The north-western member of this chain converges with the shore of the Gulf of Suez, till the two run nearly parallel. Its eastern member throws off several fragments of long and short ridges towards the Gulf of 'Akabah and the northern plateau called from it *et-Tih*. The *Jebel Dillâl* (Burckhardt, *Dhebel*) is the most southerly of the continuations of this eastern member (Seetzen, *Reisen*, iii. pt. iii. 413). The greatest elevation in the *et-Tih* range is attained a little W. of the meridian 34°, near its most southerly point; it is here 4654 feet above the Mediterranean. From this point the watershed of the plateau runs obliquely between N. and E. towards Hebron; westward of which line, and northward from the westerly member of *Jebel et-Tih*, the whole wady-system is drained by the great *Wady el-'Arish*, along a gradual slope to the Mediterranean. The shorter and much steeper slope eastward partly converges into the large ducts of *Wadys Fikreh* and *el-Jeib*, entering the Dead Sea's south-western angle through the southern wall of the Ghôr, and partly finds an outlet nearly parallel, but further to the S., by the *Wady Jerafeh* into the 'Arabah. The great depression of the Dead Sea (1300 feet below the Mediterranean) explains the

greater steepness of this eastern slope. In crossing this plateau, Seetzen found that rain and wind had worked depressions in parts of its flat, which contained a few shrubs or isolated bushes. This flat rose here and there in heights steep on one side, composed of white chalk with frequent lumps of flint embedded (iii. 48). The plateau has a central point in the station ^m *Khan Nûkhl*, so named from the date-trees which once adorned its wady, but which have all disappeared. This point is nearly equidistant from Suez westward, 'Akabah eastward, *el-'Arish* northward, and the foot of *Jebel Mûsa* southward. It lies half a mile N. of the "Hadj-route," between Suez and 'Akabah, which traverses "a boundless flat, dreary and desolate" (*ibid.* 56), and is 1494^m feet above the Mediterranean—nearly on the same meridian as the highest point before assigned to *et-Tih*. On this meridian also lies *Um Shaumer* farther south, the highest point of the entire Peninsula, having an elevation of 9300 feet, or nearly double that of *et-Tih*. A little to the W. of the same meridian lies *el-'Arish*, and the southern cape, *Râs Mohammed*, is situated about 34° 17'. Thus the parallel 31°, and the meridian 34°, form important axes of the whole region of the Peninsula. A full description of the wilderness of *et-Tih* is given by Dr. Robinson (i. 177, 8, 199), together with a memorandum of the travellers who explored it previously to himself.

On the eastern edge of the plateau to the N. of the *et-Tih* range, which is raised terrace-wise by a step from the level of the Ghôr, rises a singular second, or, reckoning that level itself, a third plateau, superimposed on the general surface of the *et-Tih* region. These Russegger (*Map*) distinguishes as three terraces in the chalk ridges. Dr. Kruse, in his *Anmerkungen* on Seetzen's travels (iii. pt. iii. 410), remarks that the *Jebel et-Tih* is the *montes nigri*, or *μέλαρες* of Ptolemy, in whose view that range descends to the extreme southern point of the Peninsula, thus including of course the Sinaitic region. This confusion arose from a want of distinct conception of geographical details. The name seems to have been obtained from the dark, or even black colour, which is observable in parts (see p. 1750, note ^r).

The Hadj-route from Suez to 'Akabah, crossing the Peninsula in a direction a little S. of E., may stand for the chord of the arc of the *et-Tih* range the length of which latter is about 120 miles. This slope, descending northwards upon the Mediterranean, is of limestone (*S. and P.* 7), covered with coarse gravel interspersed with black flints and drift (Russegger's *Map*). But its desolation has not always been so extreme, oxen, asses, and sheep having once grazed in parts of it where now only the camel is found. Three passes through the *et-Tih* range are mentioned by Robinson (i. p. 123; comp. 561-3, App. xxii.)—*er-Râkineh*, the western; *el-Mureikhy*, the eastern; and *el-Wûrsah*, between

^m Seetzen, who crossed this route 6 hours to the E. of this station, says that this road, and not the range of *et-Tih*, is the political division of the country, all the country to the S. of the road being reckoned as the *Tûr*, and that northwards as appertaining to Syria (*Reisen*, iii. 410-11, comp. p. 58). His course lay between the route from Hebron to 'Akabah, and that from Hebron to Suez. He went straight southwards to *Feirân*; a route which no traveller has followed since.

ⁿ This measurement is a mean between that given in Stanley (map, *S. & P.* 5), and Russegger's estimate, as given by Seetzen (*Reisen*, *El.* pt. iii. 411).

The most reticulated mass of wadys in the whole peninsula, if deemed worth fighting for, would form a battle-ground for all practical purposes, though not properly a "field" of battle, and the battle might decisively settle supremacy within certain limits, although no regular method of warfare might be applicable, and the numbers actually engaged might be inconsiderable. It would perhaps resemble somewhat more closely a street fight for the mastery of a town.

¹ Stanley, *S. & P.* 5; Hamilton, *Sinai, the Hedjaz, and Soudan*, 14.

² Stanley, *S. & P.* 8.

the two. These all meet S. of *Ruhaibeh* (Rehoboth, Gen. xxvi. 22?), in about N. lat. $31^{\circ} 5'$, E. long. $34^{\circ} 42'$, and thence diverge towards Hebron and Gaza. The eastern^o is noted by Russegger as 4853 feet^p above sea-level. Seetzen took the *et-Tih* range for the "Mount Seir," passed on the way from Sinai (Horeb, Deut. i. 2) to Kadesh Barnea by the Israelites (*Reisen*, iii. 28; comp. *ibid.* Kruse's *Anmerkungen*, pt. iii. 417). It would form a conspicuous object on the left to the Israelites, going south-eastwards near the coast of the Gulf of Suez. Seetzen, proceeding towards Suez, *i. e.* in the opposite direction, mentions a high sandy plain (*Reisen*, iii. p. 111), apparently near *Wady Ghüründel*, whence its steep southern face was visible in a white streak stretching westwards and eastwards. Dr. Stanley (*S. and P.* 7) says, "however much the other mountains of the Peninsula vary in form or height, the mountains of the *Tih* are always alike—always faithful to their tabular outline and blanched desolation."^q They appear like "a long limestone wall." This traveller saw them, however, only "from a distance" (*ibid.* and note 2). Seetzen, who crossed them, going from Hebron to Sinai, says of the view from the highest ridge of the lower mountain-line: "What a landscape was that I looked down upon! On all sides the most frightful wilderness extended out of sight in every direction, without tree, shrub, or speck of green. It was an alternation of flats and hills, for the most part black as night, only the naked rock-walls on the hummocks and heights showed patches of dazzling whiteness^r . . . a striking image of our globe, when, through Phaeton's carelessness, the sun came too near to it" (*Reisen*, iii. p. 50). Similarly, describing the scenery of the *Wady el-Biára*, by which he passed the *et-Tih* range (see note^o below), he says: "On the S. side rose a considerable range, desolate, craggy, and naked. All was limestone, chalk, and flint. The chalk cliffs gave the steep off-set of the *Tih* range on its S. side the aspect of a snow mountain" (p. 62).

The other routes which traverse the Peninsula are, that from Hebron to Suez along the maritime plain, at a distance of from 10 to 30 miles from the sea, passing *el-'Arish*; that from Suez to *Tür* along the coast of the Gulf of Suez through the *Káa*; and that from 'Akabah, near Eziongeber, ascending the western wall of the 'Arabah through the *Wady el-Jeib*, by several passes, not far from the southern extremity of the Dead Sea, towards Hebron, in a course here nearly N.W., then again N.^s A modern mountain road has been partially constructed by Abbas Pasha in the pass of the *Wady Hebrán*, leading from the coast of the Gulf of Suez towards the convent commonly called

St. Catharine's. The ascent from the trough of the 'Arabah (which is steeper-sided at its N.W. extremity than elsewhere), towards the general plateau is by the pass *el-Khúrár*, by which the level of that broad surface is attained. The smaller plateau rests obliquely upon the latter, abutting on the Dead Sea at Masada, where its side and that of the lower floor converge, and is reached by ascending through the higher *Nukb es-Súfa*. Its face, corresponding to the southern face of the *Tih* plateau, looks considerably to the W. of S., owing to this obliquity, and is delineated like a well-defined mountain-wall in Kiepert's map, having at the S.E. angle a bold buttress in the *Jebel Múkhrah*, and at the S.W. another in the *Jebel 'Aráif en-Nakah*, which stands out apparently in the wilderness like a promontory at sea. From the former mountain, its most southerly point, at about $30^{\circ} 20'$ N. L., this plateau extends northward a little east, till it merges in the southern slope of Judea, but at about $30^{\circ} 50'$ N. L., is cut nearly through by the *Wady Fikreh*, trenching its area eastward, and not quite meeting the *Wady Múrráh*, which has its declivity apparently toward the *Wady el-'Arish* westward. The face of mountain-wall mentioned above may probably be "the mountain of the Amorites," or this whole higher plateau may be so (Deut. i. 7, 19, 20). A line drawn northwards from *Rás Mohammed* passes a little to the W. of 'Aráif en-Nakah. A more precise description of some parts of this plateau has been given under KADESH.

On the whole, except in the *Debbet er-Ramleh*, sand is rare in the Peninsula. There is little or none on the sea-shore, and the plain *el-Kán* on the S.W. coast is gravelly rather than sandy (*S. and P.* 8). Of sandstone on the edges of the granitic central mass there is no lack.^t It is chiefly found between the chalk and limestone of *et-Tih* and the southern rocky triangle of Sinai. Thus the *Jebel Dillál* is of sandstone, in tall vertical cliffs, forming the boundary of *er-Ramleh* on the east side, and similar steep sandstone cliffs are visible in the same plain, lying on its N. and N.W. sides (Seetzen, iii. 66; comp. pt. iii. 413). In the *Wady Mokatteb* "the soft surface of these sandstone cliffs offered ready tablets" to the unknown wayfarers who wrote the "Sinaitic inscriptions." This stone gives in some parts a strong red hue to the nearer landscape, and softens into shades of the subtlest delicacy in the distance. Where the surface has been broken away, or fretted and eaten by the action of water, these hues are most vivid (*S. and P.* 10-12). It has been supposed that the Egyptians worked the limestone of *et-Tih*, and that that material, as found in the pyramids, was there quarried. The hardness of the granite in the *Jebel et-Tür* has been em-

^o Seetzen probably took this eastern pass, which leads out into the *Wady Beráh* (Seetzen, *El Biára*, called also *El Scháide*, *Reisen*, iii. pt. iii. 411, Kruse's *Anmerkungen*, comp. iii. 62). He, however, shortly before crossing the range, came upon "a flat hill yielding wholesome pasture for camels, considerable numbers (Haufen) of which are met with here, also two herds of goats and some sheep" (iii. 60); not strictly confirming the previous statement, which is Dr. Robinson's.

^p It is not easy to reconcile this statement with the figure (4645 ft.) given by Dr. Stanley (*S. & P.*, map, p. 5) apparently as the extreme height of the mountain *EL-Ordjme* (Stanley, *J. Edime*), since we might expect that the pass would be somewhat lower than the highest point, instead of higher. On this mountain, see p. 1767, note i.

^q Seetzen (iii. 56) remarks that "the slope of the *et-Tih*

range shows an equal wildness" to that of the desert on its northern side.

^r Comp. Dr. Stanley's description of the march down the *Wady Tayibeh* "between vast cliffs white on the one side, and on the other of a black calcined colour" (*S. & P.* 69).

^s Nearly following this track in the opposite direction, *i. e.* to the S.E., Seetzen went from Hebron to *Madara* (al *Madurah*, or *Modera*), passing by *Maon*, *el-Kirmel* (the "Carmel" of Nabal's pasture-ground in 1 Sam. xxv. 2), and *Arúr* (*Reisen*, iii. 10-18).

^t A remarkable sandstone mountain on the S.W. plain near the sea is the *Jebel Nakús* ("bell"), said to be so called from the ringing sound made by the sand pouring over its cliffs (Stewart, *T. & K.* 386, comp. Russegger *Reisen*, iii. 277).

phatically noticed by travellers. Thus, in constructing recently the mountain road for Abbas Pasha, "the rocks" were found "obstinately to resist even the gunpowder's blast," and the sharp glass-like edges of the granite soon wear away the workmen's shoes and cripple their feet (Hamilton, *Sinai, the Hedjaz, and Soudan*, 17). Similarly, Laborde says (*Comm. on Num.* xxxiii. 36): "In my journey across that country (from Egypt, through Sinai to the Ghôr), I had carried from Cairo two pair of shoes; they were cut, and my feet came through; when I arrived at 'Akabah, luckily I found in the magazines of that fortress two other pair to replace them. On my return to Sinai, I was barefoot again. Hussein then procured me sandals half an inch thick, which, on my arrival in Cairo, themselves were reduced to nothing, though they had well-preserved my feet." Seetzen noticed on Mount St. Catherine that the granite was "fine-grained and very firm" (iii. 90). For the area of greatest relief in the surface of the whole Peninsula, see SINAI, §1, 2, 3. The name *Jebel et-Tûr* includes the whole cluster of mountains from *el-Fureiâ* on the N. to *Um Shaumer* on the S., and from *Mûsa* and *ed-Deir* on the E. to *Hun'r* and *Serbâl* on the W., including St. Catherine, nearly S.W. of *Mûsa*. By "Sinai" is generally understood the *Mûsa* plateau, between the *Wady Ledjâ* (Stanley, *Map*) and the *Wady Shueib* on its western and north-eastern flanks, and bounded north-westward by the *Wady er-Rabeh*, and south-eastward by the *Wady Sebâyeh* (*Sebâiyeh*, Stanley, *ib.*). The Arabs give the name of *Tûr*—properly meaning a high mountain (Stanley, *S. and P.* 8)—to the whole region south of the Hadj-route from Suez to 'Akabah as far as *Râs-Mohammed* (see above, p. 1749, note^m). The name *Tûr* is also emphatically given to the cultivable region lying S.W. of the *Jebel et-Tûr*. Its fine and rich date-palm plantation lies a good way southwards down the Gulf of Suez. Here opens on the sea the most fertile wady now to be found in the Peninsula (Burckhardt, *Arab.* ii. 362; Wellsted, ii. 9), receiving all the waters which flow down the range of Sinai westward^u (Stanley, *S. and P.* 19).

III. A most important general question, after settling the outline of this "wilderness," is the extent to which it is capable of supporting animal and human life, especially when taxed by the consumption of such flocks and herds as the Israelites took with them from Egypt, and probably—though we know not to what extent this last was supplied by the manna—by the demand made on its resources by a host of from 2,000,000 to 3,000,000 souls.^v In

answer to this question, "much," it has been observed (*S. and P.* 24), "may be allowed for the spread of the tribes of Israel far and wide through the whole Peninsula, and also for the constant means of support from their own flocks and herds. Something, too, might be elicited from the undoubted fact that a population nearly, if not quite, equal to the whole permanent population of the Peninsula does actually pass through the desert, in the caravan of the 5000 African Pilgrims, on their way to Mecca. But, amongst these considerations, it is important to observe what indications there may be of the mountains of Sinai having ever been able to furnish greater resources than at present. These indications are well summed up by Ritter (*Sinai*, pp. 926, 927). There is no doubt that the vegetation of the wadys has considerably decreased. In part, this would be an inevitable effect of the violence of the winter torrents. The trunks of palm-trees washed up on the shore of the Dead Sea, from which the living tree has now for many centuries disappeared, show what may have been the devastation produced among those mountains where the floods, especially in earlier times, must have been violent to a degree unknown in Palestine; whilst the peculiar cause—the impregnation of salt—which has preserved the vestiges of the older vegetation there, has here, of course, no existence. The traces of such a destruction were pointed out to Burckhardt (*Arab.* 538) on the eastern side of Mount Sinai, as having occurred within half a century before his visit; also to Wellsted (ii. 15), as having occurred near *Tûr* in 1832. In part, the same result has followed from the reckless waste of the Bedouin tribes—reckless in destroying and careless in replenishing. A fire, a pipe, lit under a grove of desert trees, may clear away the vegetation of a whole valley.

"The acacia^x trees have been of late years ruthlessly destroyed by the Bedouins for the sake of charcoal," which forms "the chief, perhaps it might be said the only traffic of the Peninsula" (*S. and P.* 24). Thus, the clearance of this tree in the mountains where it abounded once, and its decrease in the neighbour groups in which it exists still, is accounted for, since the monks appear to have aided the devastation. Vegetation, where maintained, nourishes water and keeps alive its own life; and no attempts to produce vegetation anywhere in this desert seem to have failed. "The gardens at the wells of Moses, under the French and English agents from Suez, and the gardens in the valleys of *Jebel Mûsa*, under the care of the Greek monks of the Convent of St. Catherine," are conspicuous examples (*Ib.* 26). Besides, a traveller

^u The following positions by East longitude from Paris are given in Seetzen, iii. pt. iii., *Anmerk.* 414:—

Suez, 29° 57' 30", Berghaus.
'Akabah, 28° 45', Niebuhr; but 28° 55' by others.
Convent St. Catherine, 28° 36' 40" 5", Seetzen and Zach;
but 31° 37' 54" by Ruppell.
Sinai, 28° 46'.
Râs Mohammed, 27° 43' 24".

But there must be grave errors in the figures, since Suez is placed furthest to the east of all the places named, whereas it lies furthest to the west; also 'Akabah lies an entire degree, by Kiepert's map, to the east of the Convent, whereas it is here put at less than 9'; and *Râs Mohammed*, which lies further to the east than all these except 'Akabah, is placed to the west of them all.

^v Dr. Stanley (*S. & P.* 24, note 1), following Ewald (*Geschichte*, ii. 61, 253, 259, 2nd edit.), says, "the most recent and the most critical investigation of this (the

Israelitish) history inclines to adopt the numbers of 600,000 (males of the warlike age) as authentic."

^x Dr. Stanley (25) thinks the ark and wooden utensils of the Tabernacle were of this timber. Seetzen (iii. 109) saw no trees nearly big enough for such service, and thinks it more probable that the material was obtained by purchase from travelling caravans; but it is not clear whether he thinks that the tree (*Mimosa Nilotica*) is in this wilderness below its usual size, or that not this but something else is the "Shittim-wood" of the A. V.

^y So called, but the proper name appears to be τῆ: ἁγίας μεταμορφώσεως, i. e. the Transfiguration of our Lord, represented in the great mosaic of Justinian, in the apse of its church, probably of his age, as is also the name (Tyrwhitt). The transfer of the body of St. Catherine thither from Egypt by angels is only one of the local legends; but its association appears to have predominated with travellers (Seetzen, iii. pt. iii. 414, 5).

in the 16th century calls the *Wady er-Rahel* in front of the Convent, now entirely bare, "a vast green plain." In this wilderness, too, abode Amalek, "the first of the nations," powerful enough seriously to imperil the passage of the Israelites through it, and importantly contributing to subsequent history under the monarchy. Besides whom we have "king Arad the Canaanite, who dwelt in the south," *i. e.* apparently on the terrace of mountain overhanging the Ghôr near Masada on the Dead Sea, in a region now wholly desolate. If his people were identical with the Amorites or Canaanites of Num. xiv. 43; Deut. i. 44, then, besides the Amalekites of Ex. xvii. 8, we have one other host within the limits of what is now desert, who fought with Israel on equal or superior terms; and, if they are not identical, we have two such (Num. xiv. 40-45, xxi. 1, xxxiii. 40; Deut. i. 43, 44). These must have been "something more than a mere handful of Bedouins. The Egyptian copper-mines, monuments, and hieroglyphics in *Sûrâbit el-Khadîm* and the *Wady Mûghâra*, imply a degree of intercourse between Egypt and the Peninsula" in a period probably older than the Exodus, "of which all other traces have long ceased. The ruined cities of Edom in the mountains east of the 'Arabah, and the remains and history of Petra itself, indicate a traffic and a population in these remote regions which now is almost inconceivable" (*S. & P.* 26). Even the 6th and 7th centuries A.D. showed traces of habitation, some of which still remain in ruined cells and gardens, &c., far exceeding the tale told by present facts. Seetzen, in what is perhaps as arid and desolate a region as any in the whole desert, asked his guide to mention all the neighbouring places whose names he knew. He received a list of sixty-three places in the neighbourhood of Madûrah, Petra, and 'Akabah, and of twelve more in the *Ghôr es-Saphia*, of which total of seventy-five all save twelve are now abandoned to the desert, and have retained nothing save their names—"a proof," he remarks, "that in very early ages this region was extremely populous, and that the furious rage with which the Arabs, both before and after the age of Mahomet, assailed the Greek emperors, was able to convert into a waste this blooming region, extending from the limit of the Hedjaz to the neighbourhood of Damascus" (*Reisen*, iii. 17, 18).

Thus the same traveller in the same journey from Hebron to *Madûrah*) entered a *Wady* called *el-Jemez*, where was no trace of water save moist spots in the sand, but on making a hole with the hand it was quickly full of water, good and drinkable (*ib.* 13). The same, if saved in a cistern, and served out by sluices, might probably have clothed the bare wady with verdure. This is confirmed by his remark (*ibid.* 83), that a blooming vegetation shows itself in this climate wherever there is water; as well as by the example of the tank system as practised in Hindostan. He also notices that there are quicksands in many spots of the *Debbet er-Ramleh*, which it is difficult to understand, unless as caused by accumulations of water (*ibid.* 67). Similarly in the desert *Wady el-Kudeis* between Hebron and Sinai, he found a spot

of quicksand with sparse shrubs growing in it (*ib.* 48).

Now the question is surely a pertinent one, compared with that of the subsistence of the flocks and herds of the Israelites during their wanderings, how the sixty-three perished communities named by Seetzen's guide can have supported themselves? It is pretty certain that fish cannot live in the Dead Sea,^a nor is there any reason for thinking that these extinct towns or villages were in any large proportion near enough to its waters to avail themselves of its resources, even if such existed. To suppose that the country could ever have supported extensive coverts for game is to assume the most difficult of all solutions of the question. The creatures that find shelter about the rocks, as hares, antelopes, gazelles, jerboas, and the lizards that burrow in the sand (*el-Dsobb*), alluded to by this traveller in several places (iii. 67, comp. pt. ii. 415-442, and Laborde, *Comm. on Num.* xxxiii. 42), are far too few, to judge from appearances, to do more than eke out a subsistence, the staple of which must have been otherwise supplied; and the same remark will apply to such casual windfalls as swarms of edible locusts, or flights of quails. Nor can the memory of these places be probably connected with the distant period when Petra, the commercial metropolis of the Nabatheans, enjoyed the carrying trade between the Levant and Egypt westwards, and the rich communities further east. There is least of all reason for supposing that by the produce of mines, or by asphalt gathered from the Dead Sea, or by any other native commodities, they can ever have enjoyed a commerce of their own. We are thrown back, then, upon the supposition that they must in some way have supported themselves from the produce of the soil. And the produce for which it is most adapted is either that of the date-palm, or that to which earlier parallels point, as those of Jethro and the Kenites, and of the various communities in the southern border of Judah (Num. xxxiv. 4, 5; Josh. xv. 3, 4; 1 Sam. xxx. 27-31), viz. that of pasturage for flocks and herds, a possibility which seems solely to depend on adequately husbanding the water supplied by the rains. This tallies with the use of the word מִדְבָּר, for "wilderness," *i. e.* "a wide open space, with or without actual pasture, the country of the nomads, as distinguished from that of the agricultural and settled people" (*S. and P.* 486, App. §9).^b There seems however to be implied in the name a capacity for pasturage, whether actually realized or not. This corresponds, too, with the "thin," or rather "transparent coating of vegetation," seen to clothe the greater part of the Sinaitic wilderness in the present day (*ibid.* 16, 22), and which furnishes an initial minimum from which human fostering hands might extend the prospect of possible resources up to a point as far in excess of present facts as were the numbers of the Israelitish host above the 6000 Bedouins computed now to form the population of the desert. As regards the date-palm, Hasselquist speaks as though it alone afforded the means of life to some existing Arab communities. Hamilton (*Sinai, &c.*, 17) says that

^a Monconys quoted by Stanley, *S. and P.*

^b Seetzen speaks in one place of a few shell-fish being seen along its southern shore. Compare Stanley, *S. & P.* 293. [SEA, THE SALT.]

^c The word *Midbar* has been examined under the head

of DESERT [vol. i. 429]. The writer of that article has nothing to add to it, except to call attention to the use of the term in Jer. ii. 1, where the prophet in two words gives an exact definition of a *Midbar*: "a land not sown"—that is, left to nature. [G.]

in his path by the *Wady Hebrán*, towards the modern Sinai, "small clumps of uncultivated date-trees rise between the granite walls of the pass, wherever the winter torrents have left sufficient detritus for their nourishment." And again, describing the pass of the Convent, he continues, "beneath lies a veritable chaos, through which now trickles a slender thread of water, where in winter rushes down a boiling torrent" (ib. 19). It is hardly too much to affirm that the resources of the desert, under a careful economy of nature's bounty, might be, to its present means of subsistence, as that winter torrent's volume to that summer streamlet's slender thread. In the *Wady Hebrán* this traveller found "a natural bath," formed in the granite by the 'Ain Hebrán, called "the Christians' pool" (ib. 17). Two-thirds of the way up the *Jebel Mûsa* he came upon "a frozen streamlet" (ib. 30); and Seetzen, on the 14th of April, found snow lying about in sheltered clefts of the *Jebel Catharin*, where the rays of the sun could not penetrate (iii. 92). Hamilton encountered on the *Jebel Mûsa* a thunderstorm, with "heavy rain" (*Sinai, &c.*, 16). There seems on the whole no deficiency of precipitation. Indeed the geographical situation would rather bespeak a copious supply. Any southerly wind must bring a fair amount of watery vapour from the Red Sea, or from one of its expanding arms, which embrace the Peninsula on either side, like the blades of a forfex; while at no greater distance than 140 miles northward roll the waters of the Mediterranean, supplying, we may suppose, their quota, which the much lower ranges of the *Tih* and *Odjme* cannot effectually intercept. Nor is there any such shelter from rain-clouds on either of the Gulfs of Suez and 'Akabah, as the long line of mountains on the eastern flank of Egypt, which screens the rain supply of the former from reaching the valley of the Nile. On the contrary, the conformation of the Peninsula, with the high wedge of granitic mountains at its core, would rather receive and condense the vapours from either gulf, and precipitate their bounty over the lower faces of mountain and troughs of wady, interposed between it and the sea. It is much to be regretted that the low intellectual condition of the monks^d forbids any reasonable hope of adequate meteorological observations to check these merely probable arguments with reliable statements of fact; but in the absence of any such register, it seems only fair to take reasonable probabilities fully into view. Yet some significant facts are not wanting to redeem in some degree these probabilities from the ground of mere hypothesis. "In two of the great wadys" which break the wilderness on the coast of the Gulf of Suez, "*Ghūründel*, and *Useit*, with its continuation of the *Wady Tayibeh*, tracts of vegetation are to be found in considerable luxuri-

ance." The wadys leading down from the Sinai range to the Gulf of 'Akabah "furnish the same testimony, in a still greater degree," as stated by Rüppell, Miss Martineau, Dr. Robinson, and Burckhardt. "In three spots, however, in the desert . . . this vegetation is brought by the concurrence of the general configuration of the country to a still higher pitch. By far the most remarkable collection of springs is that which renders the clusters of the *Jebel Mûsa* the chief resort of the Bedouin tribes during the summer heats. Four abundant sources in the mountains immediately above the Convent of St. Catherine must always have made that region one of the most frequented of the desert . . . Oases (analogous to that of Ammon in the western desert of the Nile) are to be found wherever the waters from the different wadys or hills, whether from winter streams or from such living springs as have just been described, converge to a common reservoir. One such oasis in the Sinaitic desert seems to be the palm-grove of *El-Wâdy* at *Tûr*, described by Burckhardt as so thick that he could hardly find his way through it (*S. and P.* 19, note 1; see Burckh. *Arab.* ii. 362). The other and the more important is the *Wady Feirán*, high up in the table-land of Sinai itself (*S. and P.* 18, 19)." Now, what nature has done in these favoured spots might surely be seconded^e in others by an ample population, familiarized, to some extent, by their sojourn in Egypt with the most advanced agricultural experience of the then world, and guided by an able leader who knew the country, and found in his wife's family others who knew it even better than he (*Num.* x. 31). It is thus supposable that the language of Ps. cvii. 35-38, is based on no mere pious imagery, but on actual fact: "He turneth the wilderness into a standing water, and dry ground into water-springs. And there He maketh the hungry to dwell, that they may prepare a city for habitation; and sow the fields and plant vineyards, which may yield fruits of increase. He blesseth them so that they are multiplied greatly; and *suffereth not their cattle to decrease.*" And thus we may find an approximate basis of reality for the enhanced poetic images of Isaiah (xli. 19 lv. 13). Palestine itself affords abundant tokens of the resources of nature so husbanded, as in the artificial "terraces of which there are still traces to the very summits" of the mountains, and some of which still, in the Jordan valley, "are occupied by masses of vegetation" (*S. and P.* 138, 297). In favoured spots wild luxuriance testifies to the extent of the natural resources, as in the wadys of the coast, and in the plain of Jericho, where "far and wide extends the green circle of tangled thickets, in the midst of which are the hovels of the modern village, beside which stood, in ancient times, the great city of Jericho" (ib. 306). From this plain alone, a correspondent of the British

^c There is no mistaking the enormous amount of rain which must fall on the Desert and run off uselessly into the sea. In February all the wadys had evidently had strong torrents down, and all across them from hill-side to hill-side. The whole surface of wide valleys was marked and ribbed like the bed of a stony and sandy stream in England. The great plain of *Murkhâh* was intersected in all directions by these torrents, draining the mountains about *Nukb Badera*. So all the wadys, wherever there was a decided fall. Major Macdonald (engaged at present in superintending the working of a turquoise bed at *Sûrâbit el-Khadim*) said that after a sudden storm in the hills to the N., he had from two to

three feet of water running furiously through his tents for three hours, in *Wady Mûghâra*. Common industry in digging tanks would make all the wadys "blossom as the rose" (Tyrwhitt).

^d See Dr. Stanley's estimate of the inmates of the convent (*S. & P.* 55, 56).

^e Nay, it is possible that such works had already to some extent been undertaken on account of the mining colonies which certainly then existed at *Wady Mûghâra* and *Sûrâbit el-Khadim*, and were probably supported on the produce of the country, not sent on camels from Egypt (Tyrwhitt).

Consu. at Jaffa asserts that he could feed the whole population of modern Syria (*Cotton Supply Reporter*, June 14, 1862). But a plantation redeemed from the wilderness is ever in the position of a besieged city; when once the defence of the human garrison is withdrawn, the fertility stimulated by its agency must obviously perish by the invasion of the wild. And thus we may probably suppose that, from numberless tracts, thus temporarily rescued from barrenness, in situations only moderately favourable, the traces of verdure have vanished, and the desert has reclaimed its own; or that there the soil only betrays its latent capacity by an unprofitable dampness of the sand.

Seetzen, on the route from Hebron to Sinai, after describing an "immense flinty plain," the "dreariest and most desolate solitude," observes that, "as soon as the rainy season is over and the warm weather sets in, the pits (of rain-water) dry up, and it becomes uninhabitable," as "there are no brooks or springs here" (iii. 55, 56). Dr. Stewart (*The Tent and the Khan*, 14, 15) says of the *Wady Ahthi*, which he would identify with Etham (Ex. xiii. 20; Num. xxxiii. 6), "sand-hills of considerable height separate it from the sea, and prevent the winter rains from running off rapidly. A considerable deposit of rich alluvial loam is the result, averaging from 2 to 4 inches in thickness, by sowing upon which immediately after the rains the Bedouins could certainly reap a profitable harvest; but they affect to despise all agricultural labour. . . . Yet," he adds, "the region never could have supplied food by its own natural vegetation for so great a multitude of flocks and herds as followed in the train of the Israelites." This seems rather a precipitate sentence; for one can hardly tell what its improved condition under ancient civilization may have yielded, from merely seeing what it now is, after being overrun for centuries by hordes of contemptuous Bedouins. Still, as regards the general question, we are not informed what numbers of cattle followed the Israelites out of Egypt. We only know that "flocks and herds" went with them, were forbidden to graze "before the mount" (Sinai), and shared the fortunes of the desert with their owners. It further appears that, at the end of the forty years' wandering, two tribes and a half were the chief, perhaps the only, cattle-masters. And, when we consider how greatly the long and sore bondage of Egypt must have interfered with their favourite pursuit during the eighty years of Moses' life before the Exodus, it seems reasonable to think that in the other tribes only a few would have possessed cattle on leaving Egypt. The notion of a people "scattered abroad throughout all the land of Egypt" (Ex. v. 12), in pursuit of wholly different and absorbing labour, being able generally to maintain their wealth as sheep-masters is obviously absurd. It is therefore supposable that Reuben, Gad, and a portion of Manasseh had, by remoteness of local position, or other favourable circumstances to us unknown, escaped the oppressive consequences to their flocks and herds which must have generally prevailed. We are not told that the lambs at the first passover were obtained from the flock of each family, but only that they were bidden to "draw out and take a lamb for an house"—a direction quite consistent in many, perhaps in most cases, with purchase. Hence it is probable that these two tribes and a half may have been the chief cattle-masters first as well as last. If they had enough cattle to find their pursuit in tending

them, and the others had not, economy would dictate a transfer; and the whole multitude of cattle would probably fare better by such an arrangement than by one which left a few head scattered up and down in the families of different tribes. Nor is there any reason to think that the whole of the forty years' sojourn was spent in such locomotion as marks the more continuous portion of the narrative. The great gap in the record of events left by the statement of Deut. i. 46, "Ye abode in Kadesh many days," may be filled up by the supposition of quarters established in a favourable site, and the great bulk of the whole time may have been really passed in such stationary encampments. And here, if two tribes and a half only were occupied in tending cattle, some resource of labour, to avoid the embarrassing temptations of idleness in a host so large and so disposed to murmur, would be, in a human sense, necessary. Nor can any so probable an occupation be assigned to the remaining nine and a half tribes, as that of drawing from the wilderness whatever contributions it might be made to afford. From what they had seen in Egypt, the work of irrigation would be familiar to them, and from the prospect before them in Palestine the practice would at some time become necessary: thus there were on the whole the soundest reasons for not allowing their experience, if possible, to lapse. And, irrigation being supposed, there is little, if any, difficulty in supposing its results; to the spontaneousness of which ample testimony, from various travellers, has been cited above. At any rate it is unwise to decide the question of the possible resources of the desert from the condition to which the apathy and fastidiousness of the Bedouins have reduced it in modern times. On this view, while the purely pastoral tribes would retain their habits unimpaired, the remainder would acquire some slight probation in those works of the field which were to form the staple industry of their future country. But, if any one still insists that the produce of the desert, however supposably improved, could never have yielded support for all "the flocks and herds"—utterly indefinite as their number is—which were carried thither; this need not invalidate the present argument, much less be deemed inconsistent with the Scriptural narrative. There is nothing in the latter to forbid our supposing that the cattle perished in the wilderness by hundreds or by thousands. Even if the words of Ps. cvii. 38 be taken in a sense literally historical, they need mean no more than that, by the time they reached the borders of Palestine, the number so lost had, by a change of favourable circumstances, been replaced, perhaps even by capture from the enemy, over whom God, and not their own sword, had given them the victory. All that is contended for is, that the resources of the wilderness were doubtless utilized to the utmost, and that the flocks and herds, so far as they survived, were so kept alive. What those resources might amount to, is perhaps nearly as indefinite an inquiry as what was the number of the cattle. The difficulty would "find its level" by the diminution of the latter till it fell within the limits of the former; and in this balanced state we must be content to leave the question.

Nor ought it to be left out of view, in considering any arguments regarding the possible change in the character of the wilderness, that Egyptian policy certainly lay, on the whole, in favour of

extending the desolation to their own frontier on the Suez side. for thus they would gain the surest protection against invasion on their most exposed border; and as Egypt rather aimed at the development of a high internal civilization than an extension of influence by foreign conquest, such a desert frontier would be to Egypt a cheap defence. Thus we may assume that the Pharaohs, at any rate after the rise of the Assyrian empire, would discern their interest and would act upon it, and that the felling of wood and stopping of wells, and the obliteration, wherever possible, of oases, would systematically make the Peninsula untenable to a hostile army descending from the N.E. or the N.

IV. It remains to trace, so far as possible, the track pursued by the host, bearing in mind the limitation before stated, that a variety of converging or parallel routes must often have been required to allow of the passage of so great a number. Assuming the passage of the Red Sea to have been effected at some spot N. of the now extreme end of the Gulf of Suez, they would march from their point of landing a little to the E. of S. Here they were in the wilderness of Shur, and in it "they went three days and found no water." The next point mentioned is Marah. The *'Ain el-Hawâra* has been thought by most travellers since Burckhardt's time to be Marah. Between it and the *'Ayûn Mûsa* the plain is alternately gravelly, stony, and sandy, while under the range of *Jebel Wardân* (a branch of *et-Tih*) chalk and flints are found. There is no water on the direct line of route (Robinson, i. 87-98). *Hawâra* stands in the lime and gypsum region which lines the eastern shore of the Gulf of Suez at its northern extremity. Seetzen (*Reisen*, iii. 117) describes the water as salt, with purgative qualities; but adds that his Bedouins and their camels drank of it. He argues, from its inconsiderable size, that it could not be the Marah of Moses. This, however, seems an inconclusive reason. [MARAH.] It would not be too near the point of landing assumed, as above, to be to the N. of the *'Ayûn Mûsa*, nor even, as Dr. Stewart argues (p. 55), too near for a landing at the *'Ayûn Mûsa* itself, when we consider the incumbrances which would delay the host, and, especially whilst they were new to the desert, prevent rapid marches. But the whole region appears to abound in brackish or bitter springs (Seetzen, *ibid.* iii. 117, &c.; *Anmerk.* 430). For instance, about 1½ hour nearer Suez than the *Wady Ghûrûndel* (which Lepsius took for Marah, but which Niebuhr and Robinson regard as more probably Elim), Seetzen (*ibid.* iii. 113, 114) found a *Wady et Tâl*, with a salt spring and a salt crust on the surface of its bed, the same, he thinks, as the spot where Niebuhr speaks of finding rock-

salt. This corresponds in general proximity with Marah. The neighbouring region is described as a low plain girt with limestone hills, or more rarely chalk. For the consideration of the miracle of sweetening the waters, see MARAH. On this first section of their desert-march, Dr. Stanley (*S. and P.* 37) remarks, "There can be no dispute as to the general track of the Israelites after the passage (of the Red Sea). If they were to enter the mountains at all, they must continue in the route of all travellers, between the sea and the table-land of the *Tih*, till they entered the low hills of *Ghûrûndel*. According to the view taken of the scene of the passage, Marah may either be at 'the springs of Moses,' or else at *Hawâra* or *Ghûrûndel*." He adds in a note, "Dr. Graul, however, was told . . . of a spring near *Tih el-Amâra*, right (*i. e.* south) of *Hawâra*, so bitter that neither men nor camels could drink of it. From hence the road goes straight to *Wady Ghûrûndel*." Seetzen also inclines to view favourably the identification of *el-Amâra* with Marah. He gives it the title of a "wady," and precisely on this ground rejects the pretensions of *el-Hawâra* as being no "wady," but only a brook; whereas, from the statement "they encamped" at Marah, Marah must, he argues, have been a wady.¹ It seems certain, however, that *Wady Ghûrûndel*—whether it be Marah, as Lepsius and (although doubtfully) Seetzen thought, or Elim as Niebuhr, Robinson, and Kruse—must have lain on the line of march, and almost equally certain that it furnished a camping station. In this wady Seetzen found more trees, shrubs, and bushes than he anywhere else saw in his journey from Sinai to Suez. He particularizes several date-palms and many tamarisks, and notes that the largest quantity of the vegetable manna, now to be found anywhere in the Peninsula, is gathered here (iii. 116) from the leaves of the last-named tree, which here grows "with gnarled boughs and hoary head; the wild acacia, tangled by its desert growth into a thicket, also shoots out its grey foliage and white blossoms over the desert" (Stanley, *S. and P.* 68). The "scenery" in this region becomes "a succession of watercourses"^k (*ibid.*); and the *Wady Tayibeh*, connected with *Ghûrûndel* by *Useit*,¹ is so named from the goodly water and vegetation which it contains. These three wadys encompass on three sides the *Jebel Hummâm*; the sea, which it precipitously overhangs, being on the fourth. To judge from the configuration as given in the maps, there seems no reason why all three should not have combined to form Elim, or at any rate, as Dr. Stanley (*ibid.*) suggests, two of them. Only, from Num. xxxiii. 9, 10, as Elim appears *not* to have been on the sea,

¹ Dr. Aitoun, quoted by Dr. Stewart (*l. c.*), it seems, denies this.

^k In the *Wady Tâl* were found date-palms, wild trunkless tamarisks, and the white-flowering broom; also a small, sappy growth, scarce a hand high, called *el Szemmhh* by the Bedouins, which, when dried, is pounded by them and mixed with wheat for bread. It has a saltish-sour taste, and is a useful salad herb, belonging to the order *Mesembryanthemum*, Linn. (Seetzen, *ibid.*).

¹ Yet he apparently allows as possible that Marah may be found in a brook observed by Fûrer a little to the N. of *Ghûrûndel* (iii. 117).

¹ There is, however, a remarkable difference between the indication of locality given by Seetzen to this wady, and the position ascribed to the *Tih el-Amâra*, as above. For Seetzen (or rather Dr. Kruse, commenting on his

Journal) says, Robinson passed the wady *two hours nearer Suez* than *Hawâra*, and therefore so far to the north, *not south*, of it (*Reisen*, iii. pt. iii. 430-1). Hence it is possible that the *Tih* and the *Wady el-Amâra* may be distinct localities, and the common name result from the common property of a briny or bitter spring. Kiepert's map (in Robinson, vol. i.) gives the two names *Amâra* and *Hawâra* close together, the former a little, but less than a mile, to the N.
^k So Dr. Kruse notices that Dr. Robinson's Arabs who camped in *Ghûrûndel* found, at half an hour's distance from their camping ground, a flowing brook and copious fountains, such as they hitherto nowhere found in the peninsula (Seetzen, iii. pt. iii. 430).

¹ Robinson (i. 69) says that near this wady hot sulphureous springs were visited by Niebuhr, and are ascribed by Russegger.

we must suppose that the encampment, if it extended into three wadys, stopped short of their seaward extremities. The Israelitish host would scarcely find in all three more than adequate ground for their encampment. Beyond (*i. e.* to the S.E. of *Ghüründel*), the ridges and spurs of limestone mountain push down to the sea, across the path along the plain (Robinson, i. 70, and *Map*).

This portion of the question may be summed up by presenting, in a tabular form, the views of some leading travellers or annotators, on the site of Elim:—

<i>Wady Ghüründel.</i>		<i>Wady Useit.</i>	Some warm springs north of <i>Tûr</i> , which feed the rich date-plantations of the convent there, Seetzen.
Niebuhr, Robinson, Kruse.	One or both, Stanley.	Laborde "possibly," Robinson (i. 72).	

[By Lepsius identified with Marah.]

Dr. Kruse (*Anmerk.* 418) singularly takes the words of Ex. xv. 27, "they encamped there (in Elim) *by the waters*," as meaning "by the sea;" whereas, from Num. xxxiii. 9, 10, it appears they did not reach the sea till a stage further, although their distance from it previously had been but small.

From Elim, the next stage brought the people again to the sea. This fact, and the enviable position in respect of water supply, and consequent great fertility, enjoyed by *Tûr* on the coast, would make it seem probable that *Tûr* was the locality intended; but as it lies more than seventy miles, in a straight line, from the nearest probably assignable spot for Elim, such a distance makes it a highly improbable site for the next encampment. The probable view is that their seaside camp was fixed much nearer to the group of wadys viewed as embracing Elim, perhaps in the lower part of the *Wady Tayibeh*, which appears to have a point of juncture with the coast (Stanley, *S. and P.* 38). The account in Ex. xvi. knows nothing of this encampment by the sea, but brings the host at once into "the wilderness of Sin;" but we must bear in mind the general purpose of recording, not the people's history so much as God's dealings with them, and the former rather as illustrative of the latter, and subordinate thereto. The evident design however, in Num. xxxiii. being, to place on record their itinerary, this latter is to be esteemed as the *locus classicus* on any topographical questions, as compared with others having a less special relation to the track. The "wilderness of Sin" is

an appellation no doubt representing some natural feature, and none more probably than the alluvial plain, which, lying at the edge of the sea, about the spot we now regard them as having reached begins to assume a significant appearance. The modern name for this is *el-Kâa*, identified by Seetzen^m with this wilderness (iii. pt. iii. 412). Dr. Stanleyⁿ calls *el-Kâa*, at its initial point, "the plain of *Murkhâh*," and thinks it is probably this wilderness. Lower down the coast this plain expands into the broadest in the Peninsula, and somewhere in the still northern portion of it we must doubtless place the "Dophkah"^o and "Alush" of Num. xxxiii. 12-14.

In the wilderness of Sin occurred the first murmuring for food, and the first fall of manna. The modern confection sold under that name is the exudation collected from the leaves of the tamarisk tree (*tamarix Orientalis*, Linn., Arab. *tarfa*, Heb. *טַרְפָּא*) only in the Sinaitic valleys, and in no great abundance.^p If it results from the punctures made in the leaf by an insect (the *coccus manniparus*, Ehrenberg) in the course of June, July, and August, this will not suit the time of the people's entering the region "on the fifteenth day of the second month after" their departure from Egypt (Ex. xvi. 1-8). It is said to keep as a hardened syrup for years (Laborde, *Comment. Geogr.* on Ex. xvi. 13, 14), and thus does not answer to the more striking characteristics described in Ex. xvi. 14-26. [MANNA.] Seetzen thought that the gum Arabic, an exudation of the acacia, was the real manna of the Israelites; *i. e.* Seetzen regards the statement of "bread from heaven" as a fiction (*Reisen*, iii. 75-79). A caravan of a thousand persons is said by Hasselquist (*Voyages, &c., Materia Medica*, 298, transl. ed. 1766) to have subsisted solely on this substance for two months. In the same passage of Ex. (v. 13) quails are first mentioned.

In most portions of the earlier route it is more important to show the track than to fix the stations; and such an indication only can be looked for where nothing beyond the name of the latter is recorded. Supposing now that the alluvial plain, where it first begins to broaden to a significant size, is "the wilderness of Sin," all further questions, till we come to Sinai, turn on the situation assigned to Rephidim. If, as seems most likely, Rephidim be found at *Feirân* [REPHIDIM], it becomes almost certain that the track of the host lay to the north of *Serbâl*,^q a magnificent five-peaked mountain, which some have thought to be Sinai, and which becomes first visible at the plain of *Murkhâh*. [SINAI.]

^m He calls it the Wilderness of *Sir*, but this is plainly a misprint for *Sin*.

ⁿ His map, however, omits the name *el-Kâa*. Robinson thinks the wilderness of Sin is the maritime plain south-east of *Murkhâh*, but not certainly including the latter.

^o Seetzen thought that Dophkah might possibly be traced in the name of a place in this region, *el Tobbacha* (Kruse). For Alush there is no conjecture.

^p Seetzen compares it to the round beads obtained from the mastich; and says it is used as a purgative in Upper Egypt, and that it is supposed to be brought out by the great effect of heat on a sandy soil, since in Syria and elsewhere this tree has not the product.

^q Dr. Stanley notices that possibly, viewing *Ghüründel* (or *Useit*, which lies beyond it, from Suez) as Elim, the host may have gone to the latter (the further point), and then have turned back to the lower part of *Ghüründel*,

and there pitched by the "Red Sea." Then, he further remarks, it was open to them to take a northern course for Sinai (*Jebel Mûsa*), avoiding *Serbâl* and *Feirân* altogether (*S. & P.* 38). But all this, he adds, seems "not likely." That route passes by *Surâbit el-Khâdim* to the *Jebel Mûsa*. Robinson, who went by this way, conjectured that *el-Khâdim* was a place of pilgrimage to the ancient Egyptians, and might have been the object of Moses' proposed journey of "three days into the wilderness" (i. 79). The best account of this locality by far, which the present contributor has met with, is that in the MS referred to at the end of this article. The writer dwells especially on the immense remains of mining operations, refuse of fuel, metal, &c., to be seen there; also on the entrenched camp at *Mûghâra*, discovered recently by Major Macdonald, evidently a work of great labour and of capacity for a large garrison.

The tabernacle was not yet set up, nor the order of march organized, as subsequently (Num. x. 13, &c.), hence the words "track" or "route," as indicating a line, can only be taken in the most wide and general sense. The road slowly rises between the coast and *Feirán*, which has an elevation of just half the highest peak of the whole cluster. *Feirán* must have been gained by some road striking off from the sea-coast, like the *Wady Mokatteb*, which is now the usual route from Cairo thither, perhaps by several parallel or converging lines. Those who reject *Feirán* for Rephidim will have the onus of accounting for such a fruitful and blooming spot as, from its position, it must always have been, being left out of the route, and of finding some other site for Rephidim. Possibly *Túr* itself might be Rephidim, but then not one of the sites generally discussed for Sinai will suit. It seems better then to take *Feirán*, or the adjacent valley of *es-Sheykh* in connexion with it, for Rephidim. The water may have been produced in one, and the battle have taken place in the other, of these contiguous localities; and the most direct way of reaching them from *el-Murkhâh* (the "wilderness of Sin") will be through the wadys *Shellâh* and *Mokatteb*. Dr. Stanley, who suggests the road by the S. of *Serbâl*, through *Wady Hebrân* (Robinson, i. 95), as also a possible route to Sinai (*S. and P.* 38, 4), and designates it "the southern" one, omits to propose any alternative station for Rephidim; as he also does in the case of "the northern" route being accepted. That route has been already mentioned [page 1576, note a], but is of too remote a probability to require being here taken into view. The *Wady Mokatteb*, the "written," as its name imports, contains the largest number of inscriptions known as the Sinaitic. They are scratched on the friable surface of the sandstone masses which dot the valley on either side, some so high as to have plainly not been executed without mechanical aid and great deliberation. They are described or noticed by Dr. Robinson, Burckhardt, Laborde, Seetzen, and others, but especially by Dr. Stanley (*S. and P.* 57-62). [See on this subject SINAI, notes ^a and ^o.]

V. Besides the various suggestions regarding Horeb and Sinai given under SINAI, one occurs in Dr. Kruse's *Anmerkungen* on Seetzen, which is worth recording here. Seetzen approached the *Jebel Mûsa* from the N., a little W., by a route which seems to have brought him into the region through which Dr. Robinson approached it from the N.W. On this Dr. Kruse remarks, "Horeb lay in the plain of Rephidim . . . a day's march short of (*vor*) Sinai, on a dry plain, which was extensive enough for a camping-ground, with a rock-fountain struck by Moses from the rock. This distance just hits the plain *es-Sheb* (*Seheb*, Kiepert's Map), which Robinson entered before reaching the foremost ridge of Sinai, and suits the peaked mountain *el-Orf*, in the highest point of this plain. That this plain, too, is large enough for fighting in (as

mentioned Ex. xvii. 9), is plain from Robinson's statement (i. 141) of a combat between two tribes which took place there some years before his visit. Robinson, from this rocky peak, which I took for Horeb, in 1½ hour reached the spring *Gurbeh*, probably the one the opening of which was ascribed to Moses, and thence in another hour came to the steep pass *Nûkb Hâwy*, to mount which he took 2¼ hours, and in 2¼ hours more, crossing the plain *er-Râheh*, arrived at the convent at the foot of Sinai. Seetzen's Arabs gave the name of *Orribe* * to a mountain reached before ascending the pass, no doubt the same as Robinson's *el-Orf* and the Horeb of Holy Writ" (*Reisen*, iii. pt. iii. 422; comp. 414). He seeks to reconcile this with Ex. xxxiii. 6, which describes the people, penitent after their disobedience in the matter of the golden calf, as "stripping themselves of their ornaments *by the Mount Horeb*," by supposing that they were by Moses led back again † from Sinai, where God had appeared to him, and immediately below which they had encamped, to Horeb in the plain of Rephidim. But this must have been a day's journey backward, and of such a retrograde movement the itinerary in Num. xxxiii. 14, 15, 16, has no trace. On the contrary, it says, "they removed from the desert of Sinai and pitched in Kibroth Hattaavah." Now, although they stayed a year in the wilderness of Sinai (Ex. xix. 1; Num. x. 11, 12), and need not be supposed to have had but one camping station all the time, yet Rephidim clearly appears to lie without the limits of that wilderness (Ex. xvii. 1, xix. 1, 2; Num. xxxiii. 15), and a return thither, being a departure from those limits, might therefore, we should expect, be noticed, if it took place; even though all the shiftings of the camp *within* the wilderness of Sinai might not be set down in the itinerary. Under SINAI an attempt is made to reconcile the "rock in Horeb" at Rephidim with a "*Mouni Horeb*" (the same, in fact, as Sinai, though with a relative difference of view), by regarding "Horeb" as a designation descriptive of the ground, applicable, through similarity of local features, to either. If this be not admitted, we may perhaps regard the *Wady es-Sheykh*, a crescent concave southwards, whose western horn joins *Wady Feirán*, and whose eastern finds a south-eastern continuation in the plain *er-Râheh* (leading up to *Jebel Mûsa*, the probable Sinai), as *the Horeb* proper. This contains a rock called traditionally the "seat of Moses" (Schubert, *Reisen*, ii. 356). And this is to some extent confirmed by the fact that the wady which continues the plain *er-Râheh* to the N.W., forming with the latter a slightly obtuse angle, resumes the name of *es-Sheykh*. If we may suppose the name "Horeb," though properly applied to the crescent *Wady es-Sheykh*, which joins *Feirán*, to have had such an extension as would embrace *er-Râheh*, then the "rock in Horeb" might be a day's journey from the "Mount (of) Horeb." † This view, it may be observed, does not exclude that just referred to under SINAI, but merely removes it from resting

* Through the wilderness of *Kâa* (from its northern border) to the opening of *Wady Hebrân* into it is 5½ hours' journey. The manna tamarisk is found there; and some birds, called by Dr. Kruse "*Wüstenhühnern*," which he appears to think might be the quails of Scripture. Seetzen in his journal plainly sets down the "quails" as being wholly a mistake for locusts (*Reisen*, iii. pt. iii. 413, comp. 80).

† Two hardly distinguishable mountains on either side of the way (from the *Wady Beitzarân*) were named *Orribe* and *Preuech*" (*Reisen*, iii. 69).

* He thinks the reason why they were thus countermanded was because "Horeb" was better supplied with water, but he does not show that the "spring *Gurbeh*" adequately meets this condition (*ib.* 422).

† The expression *מֶהַר הֹרֵב* in Ex. xxxiii. 6 may probably be, like the expression *הַר הָאֱלֹהִים*, iii. 1, and that of *בְּהַר יְהוָה*, Josh. xxi. 11, &c., two nouns in regimen, the "mount of Horeb."

on the sense there proposed for "Horeb" (הֹרֵב).
 as a local appellative, to more general grounds.

But whatever may be the case with other sacred localities, the identification of Sinai itself will probably never be free from obscurity. We seem to have adequate information regarding all the eminent mountains within the narrow compass to which our choice is reduced, and of all the important passes. Nor is it likely that any fresh clue of trustworthy local tradition will be unravelled, or any new light thrown on the text of the Scriptural statements. Somewhere in the granitic nucleus of lofty mountain-crests the answer, doubtless, lies.^v For the grounds on which a slight preponderance of probability rests in favour of the *Jebel Mûsa*,^x see SINAI. But even that preponderance mainly rests on the view that the numbers ascribed in our present text to the host of Israel are trustworthy. If further criticism should make this more doubtful than it now is, that will have the probable effect of making the question more vague rather than more clear than it is at present. "This degree of uncertainty is a great safeguard for the real reverence due to the place. As it is, you may rest on your general conviction and be thankful" (*S. & P.* 76). The tradition which has consecrated the *Jebel Mûsa* can, we know, be traced to its source in a late year. It has the taint of modernism and the detective witness of the older tradition of *Serbâl*. Dr. Stanley thinks it "doubtful whether the scene of the giving of the Law, as we now conceive it, ever entered into the minds of those who fixed the traditional site. The consecrated peak of the *Jebel Mûsa* was probably revered simply as the spot where Moses saw the vision of God, without reference to any more general event" (*S. & P.* 76), and this is likely to have been equally true of *Serbâl* before it. The Eastern mind seized on the spot as one of devout contemplation by the one retired saint; the Western searches for a scene which will bring the people perceptibly into the region of that Presence which the saint beheld.

Certain vivid impressions left on the minds of travellers seem to bespeak such remarkable features for the rocks of this cluster, and they are generally so replete with interest, that a few leading details of the aspect of principal mountains may find place here. Approaching the granitic nucleus from the N. side, Seetzen found himself "ever between two high wild and naked cliffs of granite." All possible forms of mountains blended in the view of the group, conical and pointed, truncated, serrated, and rounded (*Reisen*, iii. 69, 67). Immediately previous to this he had been upon the perpendicular sandstone cliffs, which in *el-Dillâl* bounded the sandy plain *er-Ramleh* on the eastern side, whilst similar steep sandstone cliffs lay on the N. and N.W. On a nearer view small bright quartz-grit (*Quarzkiesel*), of whitish-yellow and reddish hue, was observed in the coarse-grained sandstone. Dr. Stanley,

^v The *Tabula Peutingeraria* gives in the interior of the Sinaitic peninsula a wilderness indicated as "desertum ubi xl. annos erraverunt filii Israelis ducente Moyse," and marks therein a three-peaked mountain, with the words, "hic legem acceperunt in monte Syna." Dr. Kruse thinks the 'three peaks' mean Sinai (*i. e.* the *Jebel Mûsa*), *Ag. Epistémé* and the *Jebel Hum'r* (Seetzen, *Reisen*, iii. pt. iii. 421).

^x Dr. Kruse says, "This highest S.E. point of Sinai is indisputably the 'mountain of the Lord' of Holy Writ, the modern Mount St. Catherine. The N.W. part of Sinai

approaching from the N.W., from *Wady Shellâl*, through *Wadys Sûlri* and *Feirân*, found the rocks of various orders more or less interchanged and intermixed. In the first, "red tops resting on dark-green bases closed the prospect in front," doubtless both of granite. Contrast with this the description of *Jebel Mûsa*, as seen from Mount St. Catherine (*ibid.* 77), "the reddish granite of its lower mass, ending in the grey green granite of the peak itself." *Wady Sidri* lies "between red granite mountains descending precipitously on the sands," but just in the midst of it the granite is exchanged for sandstone, which last forms the rock-tablets of the *Wady Mokatteb*, lying in the way to *Wady Feirân*. This last is full of "endless windings," and here "began the curious sight of the mountains, streaked from head to foot, as if with boiling streams of dark red matter poured over them, the igneous fluid squirted upwards as they were heaved from the ground." . . . "The colours tell their own story, of chalk and limestone and sandstone and granite." Besides these, "huge cones of white clay and sand are at intervals planted along these mighty watercourses (the now dry wadys), apparently the original alluvial deposit of some tremendous antediluvian torrent, left there to stiffen into sandstone" (71). The *Wady Feirân* is bounded southwards by the *Jebel Nediye* and the *Jebel Serbâl*, which extend westwards to the maritime plain, and eastward to the Sinaitic group, and on whose further or southern side lies the widest part of *el-Kâa*, previously noticed as the "Wilderness of Sin." Seetzen remarks that *Jebel Feirân* is not an individual mountain, but, like Sinai, a conspicuous group (*Reisen*, iii. 107; comp. pt. iii. 413).

Serbâl rises from a lower level than the Sinaitic group, and so stands out more fully. Dr. Stewart's account of its summit confirms that of Burekhardt. The former mounted from the northern side a narrow plateau at the top of the easternmost peak. A block of grey granite crowns it and several contiguous blocks form one or two grottoes, and a circle of loose stones rests in the narrow plateau at the top (*The Tent and the Khan*, 117, 118). The "five peaks," to which "in most points of view it is reducible, at first sight appear inaccessible, but are divided by steep ravines filled with fragments of fallen granite." Dr. Stanley mounted "over smooth blocks of granite to the top of the third or central peak," amid which "innumerable shrubs like sage or thyme, grew to the very summit." Here, too, his ascent was assisted by loose stones arranged by human hands. The peak divides into "two eminences," on "the highest of which, as on the back of some petrified tortoise, you stand, and overlook the whole peninsula" (*S. & P.* 71, 72). Russegger says "the stone of the peak of *Serbâl* is porphyry" (*Reisen*, iii. 276). Dr. Stewart mentions the extensive view from its summit of the mountains "which arise from the western shore or

is, however, now named *Chorif* by the monks, not by the Arabs, probably in order to combine Horeb with Sinai, by which name they denote the most south-easterly point. The 'plain' or 'wilderness' of Sinai can be nothing else than the high plain situated on the northern steep declivity surrounded by the three before-named peaks of Sinai, the opposite plateau of *Jebel Fureiâ*, and E. and W. some low ridges. It is now called the plain *Râheh*, and is according to Robinson's measurement, quite large enough to hold two millions of Israelites who here encamped together" (*ibid.* 422).

the Gulf of 'Akabah," seen in the N.E., and of the Sinaitic range, "closely packed" with the intermediate *Jebel Wateiâh*, "forming the most condensed mass of mountain tops that can be imagined" (114, 115). His description of the ascent of the eastern peak is formidable. He felt a rarity of the air, and often had to climb or crawl flat on the breast. It was like "the ascent of a glacier, only of smooth granite, instead of ice." At a quarter of an hour from the summit he also "found a stair of blocks of granite, laid one above another on the surface of the smooth slippery rock" (113). On the northern summit are visible the remains of a building, "granite fragments cemented with lime and mortar," and "close beside it three of those mysterious inscriptions," implying "that this summit was frequented by unknown pilgrims who used those characters" (*S. and P.* 72).

The approach to *Jebel Mûsa* from the W. is only practicable on foot. It lies through *Wady Solam* and the *Nûbb Hâwy*, "Pass of the Wind," whose stair of rock leads to the second or higher stage of the great mountain labyrinth. Elsewhere this pass would be a roaring torrent. It is amidst masses of rock a thread of a stream just visible, and here and there forming clear pools, shrouded in palms, or leaving its clue to be traced only by rushes. From the head of this pass the cliff-front of Sinai comes in sight through "a long continued plain between two precipitous mountain ranges of black and yellow granite." This is the often-mentioned plain *er-Râheh*. Deep gorges enter it on each side, and the convent and its gardens close the view. The ascent of *Jebel Mûsa*, which contains "high valleys with abundant springs," is by a long flight of rude steps winding through crags of granite. The cave and chapel "of Elias" are passed on the slope of the ascent, and the summit is marked by the ruins of a mosque and of a Christian church. But, Strauss adds, "the 'Mount of Moses' rose in the south higher and higher still," and the point of this, *Jebel Mûsa*, eighty feet in diameter, is distant two hours and more from the plain below (*Sinai and Golgotha*, 116). The *Râs Süfsâfeh* seems a small, steep, and high mountain, which is interposed between the slope of *Jebel Mûsa* and the plain; and, from its position, surveys both the openings of *es-Sheykh* N.E. and of *er-Râheh* N.W., which converge at its foot. Opposite to it, across the plain, is the *Jebel Fureiâ*, whose peak is cloven asunder, and the taller summit is again shattered and rent, and strewn, as by an earthquake, with its own fragments. The aspect of the plain between *Jebel Fureiâ*, which here forms a salient angle, wedging southwards, and the *Râs Süfsâfeh*, is described as being, in conjunction with these mountains, wonderfully suggestive, both by its grandeur and its suitability, for the giving and the receiving of the Law. "That such a plain should exist at all in front of such a cliff is so remarkable a coincidence with the sacred narrative, as to furnish a strong

internal argument, not merely of its identity with the scene, but of the scene itself having been described by an eye-witness" (*S. and P.* 42, 43). The character of the Sinaitic granite is described by Seetzen (*Reisen*, iii. 86) as being (1) flesh-red with glass-coloured quartz and black mica, and (2) greyish-white with abundance of the same mica. He adds that the first kind is larger-grained and handsomer than the second. Hamilton speaks of "long ridges of arid rock surrounding him in chaotic confusion on every side," and "the sharp broken peaks of granite far and near as all equally desolate" (*Sinai, the Hedjaz, and Soudan*, 31). This view of "granite peaks," so thickly and wildly set as to form "a labyrinth" to the eye, was what chiefly impressed Dr. Stanley in the view from the top of *Jebel Mûsa* (*S. and P.* 77). There the weather-beaten rocks are full of curious fissures and holes (46), the surface being "a granite mass cloven into deep gullies and basins" (76). Over the whole mountain the imagination of votaries has stamped the rock with tokens of miracle. The dendrites^a were viewed as memorials of the Burning Bush. In one part of the mountain is shown the impress of Moses' back, as he hid himself from the presence of God (*ib.* 30), in another the hoof-print of Mahomet's mule, in the plain below a rude hollow between contiguous blocks of stone passes for the mould of the head of the Golden Calf; while in the valley of the *Leja*, which runs, parallel to and overhung by the *Jebel Mûsa's* greatest length, into *er-Râheh*, close to *Râs Süfsâfeh*, the famous "Stone of Moses" is shown—"a detached mass from ten to fifteen feet high, intersected with wide slits or cracks . . . with the stone between them worn away, as if by the dropping of water from the crack immediately above." This distinctness of the mass of the stone lends itself to the belief of the Rabbis, that this "rock followed" the Israelites through the wilderness, which would not be the case with the non-detached off-set of some larger cliff. The Koran also contains reference to "the rock with the twelve mouths for the twelve tribes of Israel," *i. e.* the aforesaid cracks in the stone, into which the Bedouins thrust grass as they mutter their prayers before it. Bishop Clayton accepted it as genuine, so did Whiston the translator of Josephus;^b but it is a mere *lusus naturæ*; and there is another fragment, "less conspicuous," in the same valley, "with precisely similar marks." In the pass of the *Wady es-Sheykh* is another stone, called the "Seat of Moses," described by Laborde (*S. and P.* 45-48, and notes). Seetzen adds, some paces beyond the "Stone of Moses" several springs, copious for a region so poor in water, have their source from under blocks of granite, one of which is as big as this "Stone of Moses." These springs gush into a very small dyke, and thence are conducted by a canal to supply water to a little fruit-garden . . . Their water is pure and very good. On this canal, several paces below the basin, lies a considerably

⁷ By this pass Dr. Stanley was himself conducted thither, sending his camels round by the *Wady es-Sheykh* from *Feiran*, "the more accessible though more circuitous route into the central upland." By this latter he supposes the great bulk of the host of Israel may have reached *er-Râheh* and Sinai, while "the chiefs of the people would mount" by the same pass which he took (*S. & P.* 42).

^a Dr. Stewart (*ub. sup.* 122) says, "Gebel Musa, the Sinai of monkish traditions, is neither visible from the *Gebel* (*i. e.* *Râs Süfsâfeh*), nor from any other point in

the plain of *er-Râheh*." This seems confirmed by the argument of *S. & P.* 43, 44, that Moses, descending from the *Jebel Mûsa*, would not be able to see what was going on in the plain till he emerged upon it, the height of *Süfsâfeh* effectually intercepting the view.

^b These have become scarce on this mountain: Seetzen (*Reisen*, iii. 86) expressly mentions that he observed none. They are now found abundantly in the course of constructing Abbas Pasha's mountain road (Stewart, *T. & K.* 132, 134).

^c See his note on *Ant.* iii. 1, §7.

bigger block of granite than the "Stone of Moses," "and the canal runs round so close to its side as to be half-concealed by it" (*Reisen*, iii. 95). He seems to argue that this appearance and half-concealment may have been made use of by Moses to procure belief in his having produced the water miraculously, which existed before. But this is wholly inconsistent, as indeed is any view of this being the actual "rock in Horeb," with his view of Rephidim as situated at *el-Hessueh*, the western extremity of the *Wady Feirân*. Equally at variance with the Scriptural narrative is the claim of a hole in *er-Râheh*, below *Râs Süfsâfeh*, to be "the Pit of Korah," whose story belongs to another and far later stage of the march.

On Mount St. Catherine the principal interest lies in the panorama of the whole Peninsula which it commands, embraced by the converging horns of the Red Sea, and the complete way in which it overlooks the *Jebel Mûsa*, which, as seen from it, is by no means conspicuous, being about 1000 feet lower. Seetzen mounted by a path strewn with stones and blocks, having nowhere any steps, like those mentioned as existing at *Serbâl*, and remarks that jasper and porphyry chiefly constitute the mountain. He reached the highest point in three hours, including intervals of rest, by a hard, steep path, with toilsome clambering; but the actual time of ascending was only $1\frac{3}{4}$ hours. The date-palm plantation of *Tûr* is said to be visible from the top; but the haze prevailing at the time prevented this traveller from verifying it (*Reisen*, iii. 89-93). "The rock of the highest point of this mountain swells into the form of a human body, its arms swathed like that of a mummy, but headless—the counterpart, as it is alleged, of the corpse of the beheaded Egyptian saint. . . . Not improbably this grotesque figure furnishes not merely the illustration, but the origin, of the story" of St. Catherine's body being transported to the spot, after martyrdom, from Egypt by angelic hands (*S. and P.* 45).

The remaining principal mountain is named variously *ed-Deir*, "the Convent;" "Bestin," from St. Episteme, the first abbess of the nunnery; "Solab," from "the Cross," which stands on its summit; and the "Mount of the Burning Bush," from a legend that a sun-beam shoots down, supposed miraculously, on one day in the year, through the mountain into the chapel "of the Burning Bush" (so called) in the convent (*ib.* 78). In the pass of the Convent rocks arise on every side, in long succession, fantastically coloured, grey, red, blue, bright yellow, and bronze, sometimes strangely marked with white lines of quartz or black bands of basalt; huge blocks worn into fantastic shapes . . . interrupt the narrow track, which successive ages have worn along the face of the precipice, or, hanging overhead, threaten to overwhelm the traveller in their fall. The wady which contains this pass is called by the name of *Shu'eib*—a corruption of Hobab, the name of the father-in-law of Moses (*ib.* 32, 33). At the foot of a mountain near the convent Seetzen noticed "a range of rocks of black horn-porphry, of hornblende, and black jasper, and between their scrolls or volutes white quartz." The gardens, as has been noticed, are in sight

from the approach through *er-Râheh*. Seetzen enlarges on their beauty, enhanced, of course, by the savage wild about them; "indeed a blooming vegetation appears in this climate wherever there is water" (*Reisen*, iii. 70, 73, 87). These proved capabilities of the soil are of interest in reference to the Mosaic and to every period. As regards the Convent, the reader may be referred to Dr. Stanley's animated description of its character, the policy of its founder, and the quality of its inmates (*S. and P.* 51-56). This traveller took three hours in the ascent. "In the recesses between the peaks was a ruined Bedouin village. On the highest level was a small natural basin, thickly covered with shrubs of myrrh—of all the spots of the kind that I saw, the best suited for the feeding of Jethro's flocks in the seclusion of the mountain" (*ib.* 78). He thought the prospect, however, from its summit inferior in various ways to any of the other views from the neighbouring mountains, *Serbâl*, *St. Catherine*, *Jebel Mûsa*, or *Râs Süfsâfeh*.

The rocks, on leaving Sinai on the east for 'Akabâh, are curiously intermingled, somewhat as in the opposite margin of the Wadys *Sidri* and *Mohatteb*. *Wady Seyâl* contains "hills of a conical shape, curiously slanting across each other, and with an appearance of serpentine and basalt. The wady . . . then mounted a short rocky pass—of hills capped with sandstone—and entered on a plain of deep sand—the first we had encountered—over which were scattered isolated clumps of sandstone, with occasional chalk. . . . At the close of this plain, an isolated rock, its high tiers rising out of lower tiers, like a castle." Here "the level ranges of *et-Tîh* rose in front." And soon after, on striking down, apparently, north-eastwards, "a sandy desert, amidst fantastic sandstone rocks, mixed with lilac and dull green, as if of tufa," succeeded. After this came a desert strewn with "fragments of the *Tîh*," *i. e.* limestone, but "presently," in the "Wady Ghûzâieh,"^d which turns at first nearly due northward, and then deflects westward, the "high granite rocks" reappeared; and in the *Wady el-'Ain*, "the rocks rise, red granite or black basalt, occasionally tipped as if with castles of sandstone to the height of about 1000 feet. . . . and finally open on the sea. At the mouth of the pass are many traces of flood—trees torn down, and strewn along the sand" (*ib.* 80, 81).

VI. We now pass on to resume the attempt to trace the progress of the Israelites. Their sojourn of a year in the neighbourhood of Mount Sinai was an eventful one. The statements of the Scriptural narrative which relate to the receiving of the two Tables, the Golden Calf, Moses' vision of God, and the visit of Jethro, are too well known to need special mention here; but beside these, it is certain from Num. iii. 4, that before they quitted the wilderness of Sinai, the Israelites were thrown into mourning by the untimely death of Aaron's two sons, Nadab and Abihu. This event is probably connected with the setting up of the tabernacle and the enkindling of that holy fire, the sanctity of which their death avenged. That it has a determinate chronological relation with the promulgations which from time to time were made in that

^c Dr. Stanley verified the possibility of the fact, and disproved its miraculous character by examining the ravine above the convent, through which, when the sun gains the necessary altitude, a ray would reach the chapel (*S. & P.* 46).

^d Here Dr. Stanley quitted the track pursued by Dr. Ro-

binson, which from the Convent he had hitherto followed; the latter continuing in a N.E. direction through *Wady Sumghy* to the western shore of the Gulf of 'Akabâh, the former turning northwards by the *Wady Ghûzâieh*, as above, immediately after passing the 'Ain el-Hûdherah.

wilderness, is proved by an edict in Lev. xvi., being fixed as subsequent to it (Lev. x., comp. xvi. 1). The only other fact of history contained in Leviticus is the punishment of the son of mixed parentage for blasphemy (xxiv. 10-14). Of course the consecration of Aaron and his sons is mentioned early in the Book in connexion with the laws relating to their office (viii., ix.). In the same wilderness region the people were numbered, and the exchange of the Levites against the firstborn was effected; these last, since their delivery when God anointed those of Egypt, having incurred the obligation of sanctity to him. The offerings of the princes of Israel were here also received. The last incident mentioned before the wilderness of Sinai was quitted for that of Paran is the intended departure of Hobab the Kenite, which it seems he abandoned at Moses' urgency. They now quitted the Sinaitic region for that of Paran, in which they went three days without finding a permanent encampment, although temporary halts must of course have been daily made (Num. i., ix. 15-23; x. 13, 33; xi. 35; xii. 16). A glance at Kiepert's, or any map showing the region in detail, will prove that here a choice of two main routes begins, in order to cross the intervening space between Sinai and Canaan, which they certainly approached in the first instance on the southern, and not on the eastern side. Here the higher plateau surmounting the *Tih* region would almost certainly, assuming the main features of the wilderness to have been then as they are now, have compelled them to turn its western side nearly by the route by which Seetzen came in the opposite direction from Hebron to Sinai, or to turn it on the east by going up the 'Arabah, or between the 'Arabah and the higher plateau. Over its southern face there is no pass, and hence the roads from Sinai, and those from Petra towards Gaza and Hebron, all converge into one of two trunk-lines of route (Robinson, i. 147, 151, 2, ii. 186). Taberah and Kibroth-Hattaavah, both seem to belong to the same encampment where Israel abode for at least a month (xi. 20), being names given to it from the two events which happened there. [TABERAH, KIBROTH-HATTA AVAH, QUAILS.] These stations seem from Num. x. 11-13, 33-36, to have lain in the wilderness of Paran; but possibly the passage x. 11-13 should come after that 33-36, and the "three days' journey" of ver. 33 lie still in the wilderness of Sinai; and even Taberah and Hazeroth, reached in xi., xii., also there. Thus they would reach Paran only in xii. 16, and x. 12 would be either misplaced or mentioned by anticipation only. One reason for thinking that they did not strike northwards across the *Tih* range from Sinai, is Moses' question when they murmur, "shall all the fish of the sea be gathered together for them, to suffice them?" which is natural enough if they were rapidly nearing the Gulf of 'Akabah, but strange if they were posting towards the inland heart of the desert. Again the quails* are brought by "a wind from the sea" (Num. xi. 22, 31); and various travellers (Burckhardt, Schubert, Stanley) testify to the occurrence of vast flights of birds in this precise region between Sinai and 'Akabah. Again, Hazeroth, the next station after these, is

coupled with Dizahab, which last seems undoubtedly the *Dahab* on the shore of that gulf (Deut. i. 1, and Robinson, ii. 187, note). This makes a seaward position likely for Hazeroth. And as Taberah, previously reached, was three days' journey or more from the wilderness of Sinai, they had probably advanced that distance towards the N.E. and 'Akabah; and the distance required for this will bring us so near *el-Hüdherá* (the spot which Dr. Robinson thought represented Hazeroth in fact, as it seems to do in name), that it may be accepted as a highly probable site. Thus they were now not far from the coast of the Gulf of 'Akabah. A spot which seems almost certain to attract their course was the *Wady el-'Ain*, being the water, the spring of that region of the desert, which would have drawn around it such "nomadic settlements as are implied in the name of Hazeroth, and such as that of Israel must have been" (*S. & P.* 82). Dr. Robinson remarks, that if this be so, this settles the course to Kadesh as being up the 'Arabah, and not across the plateau of *et-Tih*. Dr. Stanley thinks this identification a "faint probability," and the more uncertain as regards identity, "as the name Hazeroth is one of the least likely to be attached to any permanent or natural feature of the desert," meaning "simply the enclosures, such as may still be seen in the Bedouin villages, hardly less transitory than tents" (*S. & P.* 81, 82). We rely, however, rather on the combination of the various circumstances mentioned above than on the name. The *Wady Hüdheráh* and *Wady-el-'Ain*, appear to run nearly parallel to each other, from S.W. to N.E., nearly from the eastern extremity of the *Wady es-Sheikh*, and their N.E. extremity comes nearly to the coast, marking about a midway distance between the *Jebel Músa* and 'Akabah. In Hazeroth the people tarried seven days, if not more (Num. xi. 35, xii.), during the exclusion of Miriam from the camp while leprous. The next permanent encampment brought them into the wilderness of Paran, and here the local commentator's greatest difficulty begins.

For we have not merely to contend with the fact that time has changed the desert's face in many parts, and obliterated old names for new; but we have beyond this, great obscurity and perplexity in the narrative. The task is, first, to adjust the uncertainties of the record *inter se*, and then to try and make the resultant probability square with the main historical and physical facts, so far as the latter can be supposed to remain unaltered. Besides the more or less discontinuous form in which the sacred narrative meets us in Exodus, a small portion of Leviticus, and the greater part of Numbers, we have in Num. xxxiii. what purports at first sight to be a complete skeleton route so far as regards nomenclature; and we further find in Deuteronomy a review of the leading events of the wandering or some of them, without following the order of occurrence, and chiefly in the way of allusion expanded and dwelt upon. Thus the authority is of a threefold character. And as, in the main narrative, whole years are often sunk as uneventful, so in the itinerary of Num. xxxiii., on a near view great chasms occur, which require, where all else bespeaks a severe uniformity of method, to be somehow ac-

* Seetzen supposes that what are called quails in Scripture were really locusts (*Reisen*, iii. 80); an opinion which Coquerel (Laborde, *Comm. Geogr.* Ex. xvi. 13) appears to have shared. But surely locusts, as edible, are too well known in Scripture to make the confusion possible. Mr.

Tyrwhitt says that quails, or small partridges, which he supposes rather meant, are, as far as he saw more common in the desert than locusts.

† Robinson, *ub. sup.*; compare Stewart, *T. and K.* 116.

counted for. But, beyond the questions opened by either authority in itself, we have difficulties of apparent incongruity between them; such as the omission in Exodus of Dophka and Alush, and of the encampment by the Red Sea; and, incomparably greater, that of the fact of a visit to Kadesh being recorded in Num. xiii. 26, and again in xx. 1, while the itinerary mentions the name of Kadesh only once. These difficulties resolve themselves into two main questions. Did Israel visit Kadesh once, or twice? And where is it now to be looked for?

Before attempting these difficulties individually, it may be as well to suggest a caution against certain erroneous general views, which often appear to govern the considerations of desert topography. One is, that the Israelites journeyed, wherever they could, in nearly a straight line, or took at any rate the shortest cuts between point and point. This has led some delineators of maps to simply register the file of names in Num. xxxiii. 16-36 from Sinai in rectilinear sequence to Kadesh, wherever they may happen to fix its site, then turn the line backward from Kadesh to Ezion-Geber, and then either to Kadesh again, or to Mount Hor, and thence again, and here correctly, down the 'Arabah southwards and round the south-eastern angle of Edom, with a sweep northwards towards Moab. In drawing a map of the Wanderings, we should mark as approximately or probably ascertained the stations from Etham to Hazeroth, after which no track should be attempted, but the end of the line should lose itself in the blank space; and out of the same blank space it might on the western side of the 'Arabah be similarly resumed and traced down the 'Arabah, &c., as before described. All the sites of intervening stations, as being either plainly conjectural merely, or lacking any due authority, should simply be marked in the margin, save that Moserah may be put close to Mount Hor, and Ezion-Geber further S. in the 'Arabah [EZION-GEBER], from which to the brook Zered and onwards to the plains of Moab, the ambiguities lie in narrow ground, and a probable light breaks on the route and its stations.

Another common error is, that of supposing that from station to station, in Num. xxxiii., always represents a day's march merely, whereas it is plain from a comparison of two passages in Ex. (xv. 22), and Num. (x. 33), that on two occasions three days formed the period of transition between station and station, and therefore, that not day's marches, but intervals of an indefinite number of days between permanent encampments, are intended by that itinerary; and as it is equally clear from Num. ix. 22, that the ground may have been occupied for "two days, or a month, or a year," we may suppose that the occupations of a longer period only may be marked in the itinerary. And thus the difficulty of apparent chasms in its enumeration, for instance the greatest, between Ezion-Geber and Kadesh (xxxiii. 35-37) altogether vanishes.

An example of the error, consequent on neglect-

^a He speaks of certain stations as "placées entre le mont Sinal et Cades, espace qui ne comporte pas plus de onze journées selon l'affirmation bien positive de Deutéronome" (i. 1). He then proceeds to argue, "Ces dix-sept stations réunies aux trois que nous venons d'examiner, en forment vingt; il y a donc neuf stations . . . dont on ne sait que faire." The statement quoted from Deuteronomy, whether genuine, or an annotation that has crept into the text, merely states the distance as ordinarily known and travelled, and need not indicate that the Israelites crossed it at that rate of progress.

ing to notice this, may be seen in Laborde's map of the Wanderings, in his Commentary on Exodus and Numbers, in which the stations named in Num. xxxiii. 18-34, are closely crowded, but between those of ver. 35 and those of ver. 37 a large void follows, and between those of ver. 37 and those of ver. 39 a still larger one, both of which, since on referring to the text of his Commentary we find that the intervals all represent day's marches, are plainly impossible.

Omitting, then, for the present all consideration of the previous intervals after Hazeroth, some suggestions concerning the nomenclature and possible sites of which will be found in articles under their respective names, the primary question, did the people visit Kadesh twice, or once only, demands to be considered.

We read in Num. x. 11, 12, that "on the twentieth day of the second month of the second year . . . the children of Israel took their journeys out of the wilderness of Sinai, and the cloud rested in the wilderness of Paran." The latter statement is probably to be viewed as made by anticipation; as we find that, after quitting Kibroth-Hattaavah and Hazeroth, "the people pitched in the wilderness of Paran" (Num. xii. 16). Here the grand pause was made while the spies, "sent," it is again impressed upon us (xiii. 3), "from the wilderness of Paran," searched the land for "forty days," and returned "to Moses and to Aaron, and to all the congregation . . . unto the wilderness of Paran to Kadesh." This is the first mention of Kadesh in the narrative of the Wanderings (vers. 25, 26). It may here be observed that an inaccuracy occurs in the rendering of Moses' directions to the spies in the A. V. of xiii. 17, "get you up by this way southward" (בְּנֶגֶב), where "by the South," i. e. by the border lying in that direction from Palestine, is intended, as is further plain from ver. 22, "And they ascended by the south and came to Hebron," i. e. they went northward.^b From considerations adduced under KADESH, it seems that Kadesh probably means firstly, a region of the desert spoken of as having a relation, sometimes with the wilderness of Paran, and sometimes with that of Zin (comp. vers. 21, 26); and secondly, a distinct city within that desert limit. Now all the conditions of the narrative of the departure and return of the spies, and of the consequent despondency, murmuring, and penal sentence of wandering, will be satisfied by supposing that the name "Kadesh," here means the region merely. It is observable, also, that Kadesh is not named as the place of departure, but only as that of return. From Paran is the start; but from Zin (both regions in the desert) the search commences. And this agrees with the political geography of the southern border: to which the wilderness of Zin is always reckoned as pertaining,ⁱ whereas that of Paran always lies outside the promised land. Natural features of elevation, depression, and slope,^k are the only tokens to which

^b The word for "southward" would be נֶגֶב, as found in Ez. xl. 24, Josh. xvii. 9, 10. The word נֶגֶב appears to mean the "dry" country, and hence to become an appellative for the region on the south of Judah and Simeon where springs were scarce; see *The Negeb* by Rev. E. Wilton, pref. viii.

ⁱ Num. xxxiv. 4; Josh. xv. 3.

^k For some good remarks on the level of the desert and the slope between the south country, Dead Sea, and the 'Arabah, see Robinson, i. 587.

we can reasonably trust in deciding where the Paran wilderness ends, and that of Zin begins. It has been proposed under KADESH to regard part of the 'Arabah, including all the low ground at the southern and south-western extremity of the Dead Sea, as the wilderness of Zin. [ZIN.] Then the broad lower north-eastern plateau, including both its slopes as described above, will be defined as the Paran wilderness proper. If we assume the higher superimposed plateau, described above, to bear the name of "Kadesh" as a desert district, and its south-western mountain-wall to be "the mountain of the Amorites," then the Paran wilderness, so far as synonymous with Kadesh, will mean most naturally the region where that mountain-wall from *Jebel 'Arâif en-Nâkah* to *Jebel Mûhrah*, and perhaps thence northward along the other side of the angle of the highest plateau, overhangs the lower terrace of the *Tih*. Moses identifies the coming "to Kadesh Barnea"¹ with the coming to "the mountain of the Amorites" (Deut. i. 19, 20) whence the spies were also despatched (vers. 22, 23), which is said to have been from "Paran" in Num. xiii. 3. Suppose the spies' actual start to have been made from somewhere on the watershed of the two slopes of *et-Tih*, the spies' best way then would have been by the *Wady el-Jerafeh* into and so up the 'Arabah: this would be beginning "from the wilderness of Zin," as is said in Num. xiii. 21. Then, most naturally, by his direction to them, "go up into the mountain" (Num. xiii. 17), which he represents as acted on in Deut. i. 24, "and they turned and went up into the mountain," he meant them to mount the higher plateau, supposed the region Kadesh. By their "turning" in order to do so, it may be inferred that their course was not direct to their object, as indeed has been supposed in taking them along the 'Arabah and again up its western side by the passes *el-Khurâr* and *es-Sûfâ* (Zephath).² By these passes they must have left Zin or the 'Arabah, there being no choice. During the forty days of their absence, we may suppose the host to have moved from the watershed into the Kadesh-Paran region, and not at this period of their wanderings to have touched the city Kadesh at all. This is quite consistent with, if it be not even confirmed by, the words of the murmurers in xiv. 2, 3, "Would God we had died in *this wilderness!* And wherefore hath the Lord brought us unto *this land!*" and throughout the denunciation which follows, and throughout the same spot, the words "the wilderness," and "this wilderness," often recur, but from first to last there is no mention of a "city."

Now, in Deut. i. 19, where these proceedings pass in review before Moses, in his words to the people, there is, strictly speaking, no need to mention Kadesh at all, for the people were all the time in the wilderness of *Paran*. Yet this last is so wide a term, reaching almost from the 'Arabah to near the Egyptian frontier, that Moses might naturally use some more precise designation of the quarter he meant. He accordingly marks it by the proximity

of Kadesh. Thus, the spies' return to "the wilderness of Paran to Kadesh" means to that part of the lower plateau where it is adjacent to the higher, and probably the eastern side of it. The expression "from Kadesh-barnea even unto Gaza," is decisive of an eastern site for the former (Josh. x. 41).

Here, as is plain both from Num. xiv. 40-45 and from Deut. i. 41-44, followed the wayward attempt of the host to win their way, in spite of their sentence of prohibition, to the "hill" (Num. xiv. 40-45, Deut. i. 41-44) or "mountain" of the Amalekites and Canaanites, or Amorites, and their humiliating defeat. They were repulsed in trying to force the pass at Hormah (or Zephath, Judg. i. 14), and the region of that defeat is called "Seir," showing that the place was also known by its Horite name; and here perhaps the remnant of the Horites were allowed to dwell by the Edomites, to whose border this territory in the message of Num. xx. 16, is ascribed. [KADESH.] Here, from the notice in Num. xiv. 25, that these "Amalekites and Canaanites dwelt in the valley," we may suppose that their dwelling was where they would find pasture for their flocks, in the wady *el-Fikreh* and others tributary to *el-Jeib*, and that they took post in the "mountain" or "hill," as barring the way of the Israelites' advance. So the spies had gone by Moses' direction "this way, by the South (not 'southward,' as shown above), up into the mountain;" and this same way, "the way of the spies," through the passes of *el-Khurâr* and *es-Sûfâ*, was the approach to the city Kadesh also.

Here, then, the penal portion of the wanderings commences, and the great bulk of it, comprising a period of nearly thirty-eight years, passes over between this defeat in Num. xiv., and the resumption of local notices in Num. xx., where again the names of "Zin" and "Kadesh" are the first that meet us.

The only events recorded during this period (and these are interspersed with sundry promulgations of the Ceremonial Law), are the execution of the offender who gathered sticks on the Sabbath (Num. xv. 32-36), the rebellion of Korah (xvi.), and, closely connected with it, the adjudgment of the pre-eminence to Aaron's house with their kindred tribe, solemnly confirmed by the judicial miracle of the rod that blossomed. This seems to have been followed by a more rigid separation between Levi and the other tribes, as regards the approach to the tabernacle, than had been practically recognized before (xxvii. xviii. 22; comp. xvi. 40).

We gather, then, from Deut. i. 46, that the greater part, perhaps the whole, of this period of nearly thirty-eight years, if so we may interpret the "many days" there spoken of, was passed in Kadesh,—the region, that is, not the city; in which, of course, the camp may have been shifted at convenience, under direction, any number of times. But Num. xx. 1 brings us to a new point of departure. The people have grown old, or

Sûfâ is on the S. side of the high ground, and has probably always been the pass by which to mount it. For all this, see Mr. Wilton's own map, or any one which shows both *es-Sebata* and *es-Sûfâ*.

¹ Our A. V. here seems to have viewed הַאֲתָרִים as if derived from תָּוֵן "to spy." Gesen. renders it "regions," and the LXX. makes it a proper name *Athapeir*. It is not elsewhere found. Now the verb תָּוֵן occurs in the passage where the spies are sent forth, Num. xiii. xiv., which gives a presumption in favour of the A. V.

¹ For "Barnea," as perhaps a Horite proper name, see KADESH, note 1.

² Mr. Wilton (*Negeb*, 12, 198-202), following Rowlands (in Williams), makes Zephath *es-Sebata* on the northern side of the high broad plateau, supposed here to be the "mountain of the Amorites." On this view the Israelites must already have won that eminence from which it was nearly the intention of the Amorites to repel them; and must, when defeated, have been driven up hill from a position occupied in the plain below. The position es-

rather again young, in their wanderings. Here, then, we are at "the desert of Zin, in the first month," with the "people abiding in Kadesh." By the sequel, "Miriam died there, and was buried there," a more precise definition of locality now seems intended; which is further confirmed by the subsequent message from the same place to the king of Edom, "Behold, we are in Kadesh, a city in the uttermost of thy border" (v. 16). This, then, must be supposed to coincide with the encampment, recorded as taking place "in the wilderness of Zin, which is Kadesh," registered in the itinerary (xxxiii. 36). We see then why, in that register of specific camping-spots, there was no necessity for any previous mention of "Kadesh;" because the earlier notice in the narrative, where that name occurs, introduces it not as an individual encampment, but only as a region, within which perpetual changes of encampment went on for the greater part of thirty-eight years. We also see that they came twice to Kadesh the region, if the city Kadesh lay in it, and once to Kadesh the city; but once only to Kadesh the region, if the city lay without it. We are not told how the Israelites came into possession of the city Kadesh, nor who were its previous occupants. The probability is that these last were a remnant of the Horites, who after their expulsion by Edom from Mount Seir [EDOM] may have here retained their last hold on the territory between Edom and the Canaanitish Amorites of "the South." Probably Israel took it by force of arms, which may have induced the attack of "Arad the Canaanite,"^o who would then feel his border immediately threatened (Num. xxxiii. 40; comp. xxi. 1). This warlike exploit of Israel may, perhaps, be alluded to in Judges v. 4 as the occasion when Jehovah "went out of Seir" and "marched out of the field of Edom" to give His people victory. The attack of Arad, however,

though with some slight success at first, only brought defeat upon himself and destruction upon his cities (xxi. 3).^p We learn from xxxiii. 36 only that Israel marched without permanent halt from Ezion-geber upon Kadesh. This sudden activity after their long period of desultory and purposeless wandering may have alarmed King Arad. The itinerary takes here another stride from Kadesh to Mount Hor. There their being engaged with the burial of Aaron may have given Arad his fancied opportunity of assaulting the rear of their march, he descending from the north whilst they also were facing southwards. In direct connexion with these events we come upon a singular passage in Deuteronomy (x. 6, 7), a scrap of narrative imbedded in Moses' recital of events at Horeb long previous.^q This contains a short list of names of localities, on comparing which with the itinerary, we get some clue to the line of march from the region Kadesh to Ezion-geber southwards.

We find at the part of their route in which Aaron's death took place, that stations named "Beeroth of the children of Jaakan, Mosera (where Aaron died), Gudgodah, and Jotbath," were successively passed through; and from Num. xxxiii. 38 we find that "Aaron went up into Mount Hor. . . and died there in the fortieth year . . . in the first day of the fifth month." Assuming for Mount Hor the traditional site overhanging the 'Arabah, which they very soon after this quitted, Mosera must have been close to it, probably in the 'Arabah itself. Now the stations which in the itinerary come next before Ezion-geber, and which were passed in the strictly penal wandering which commenced from the region Kadesh, have names so closely similar that we cannot doubt we are here on the same ground. Their order is, however, slightly changed, standing in the two passages as follows:—

CONJECTURAL SITE.

- (a) 'Ain Hasb, N.W. in the 'Arabah.
- (1) Kusheibeh, mouth of the Wady Abu, near the foot of Mount Hor.
- (2) 'Ain Ghüründel.
- (3) Wady el-Ghūdhāgīdh.
- (4) Confluence of Wady el-Adhbeh with el-Jerafch.

NUM. xxxiii. 30-35.

- (a) (Hashmonah).
- (1) Moseroth.
- (2) Bene-Jaakan.^r
- (3) Hor-hagīdgad.
- (4) Jotbathah.
(Ebronah).
(Ezion-geber).

DEUT. x. 6, 7.

- (1) Beeroth of the children of Jaakan.
- (2) Mosera.
- (3) Gudgodah.
- (4) Jotbath.^s

^o More properly "the Canaanitish king of Arad."

^p He "took some of" the Israelites "prisoners." It is possible the name Mosera, or plur. Moseroth, may recall this fact; the word מוסר, (found only in the plur.), meaning "bonds" or "fetters." This would accord with the suggestion of the text that Aaron's burial gave Arad the opportunity for his raid; for Mosera must have been near Mount Hor, where that burial took place. It is possible that the destruction of these cities may not have really taken place till the entry into Canaan under Joshua (Josh. xii. 14, Judg. i. 17), and may be mentioned in Num. xxi. 2, 3, by anticipation only as a subsequent fulfilment of the vow recorded as then made. It is obvious to suggest that Modera is the Mosera of Deut. x. 6, and so Mr. Wilton (*The Negeb*, 28 &c.) has suggested, wishing to identify it with Mount Hor. But the received site for Mount Hor is the least doubtful of all in the Exodus. Josephus clearly identifies it as we do; and there is a strong improbability in a Jewish tradition fixing it in Edomitish or in Nabathean territory, unless the testimony in its favour had been overpowering. Modera might perhaps be the hill called "Sin" (Zin?), mentioned by Josephus as that in which Miriam was buried (*Ant.* iv. 4, § 6, 7).

^q A somewhat similar fragment of narrative, but relating to what perhaps took place during the time of the allocation to the people between the paragraphs of which it occurs, is found in Deut. iv. 41-43; and indeed the mention of Aaron's death, with the date and his age, and of the attack of Arad, both of which had been detailed before, is hardly less of a deviation from the dry enumeration of stations in the itinerary itself (Num. xxxiii. 38, 39). But it would be foreign to our present purpose to enter on the critical questions which these passages suggest. We assume their genuineness, and suppose them displaced.

^r See JAAKAN and BENE JAAKAN for the name. Jaakan was the grandson of Seir (1 Chr. i. 42, comp. Gen. xiv. 6, xxxvi. 27).

^s Dr. Robinson, judging from his visit, thinks that these stations could not have lain to the S. of Mount Hor, as that region is too poor in water to contain any such place as Jotbath in Deut. x. 7, and corresponds rather to the description given in Num. xxi. 4-6 (ii. 175). He thinks that 'Ain et-Tayibeh is either Beeroth Berea Jaakan or Moseroth, and Wady el-Ghūdhāgīdh Jotbath (*ibid.*).

Now in Num. xx. 14, 16, 22-29, the narrative conducts us from Kadesh the city, reached in or shortly before "the fortieth year," to Mount Hor, where Aaron died, a portion of which route is accordingly that given in Deut. x. 6, 7; whereas the parallel column from Num. xxxiii. gives substantially the same route as pursued in the early part of the penal wandering, when fulfilling the command given in the region Kadesh, "turn you, get you into the wilderness by the way of the Red Sea" (Num. xiv. 25; Deut. i. 40), which command we further learn from Deut. ii. 1 was strictly acted on, and which a march towards Ezion-geber would exactly fulfil.

These half-obliterated footsteps in the desert may seem to indicate a direction only in which Kadesh the city, lay. Widely different localities, from Petra eastward to *el-Khālesah* on the north-west, and westward to near the *Jebel Hellak*, have been assigned by different writers. The best way is to acknowledge that our research has not yet grasped the materials for a decision, and to be content with some such attempt as that under KADESH, to fix it approximately only, until more undoubted tokens are obtained. The portion of the arc of a circle with *es-Sūfa* for its centre, and a day's journey—about fifteen miles—for its radius, will not take in *el-Khālesah*, nor Petra,^a and the former name seems to be traceable, with a slight metathesis, much more probably in *Chesil*^b than in Kadesh.^c The highest plateau is marked with the ruins of Aboda, and on the inferior one, some miles S.W. of the defile of the *Wady el-Fikreh* stands a round conical hill of limestone, mixed with sand, named Madarah (Modura, or Modera), at a short day's journey from the southern end of the Dead Sea. Seetzen, who visited it, had had his curiosity raised by a Bedouin legend of a village having been destroyed by Allah and buried under that hill for the wickedness of its people; and that, as a further attestation, human skulls were found on the ground around it. This statement he resolved by visiting the spot into a simple natural phenomenon of some curious rounded stones, or pebbles, which abound in the neighbourhood. He thought it a legend of Sodom; and it might, with equal likelihood, have been referred to the catastrophe of Korah (Seetzen, *Reisen*, iii. 13), which, if our sites for Kadesh the region and Paran are correct, should have occurred in the neighbourhood, were it not far more probable that the physical appearance of the round pebbles having once given rise to the story of the skulls, the legend was easily generated to account for them.

^a Laborde (*Comment.* on Num. xxxiii. 36) places Kadesh the city "près des sources d'Embasch au fond de Ouadi Djerah" (*Wady el-Jerafeh*). Dr. Robinson thought 'Ain el-Webeh was Kadesh, the city, or, as he calls it, Kadesh Darnea (see *Map*, vol. 1., end). Dr. Stanley remarks that there is no cliff (עֲלֵה) there. See his remarks quoted under KADESH.

^b Robinson puts *es-Sūfa* at about two days' journey from the foot of Mount Hor, ii. 180-1.

^c As suggested in Williams's *Holy City*, i. 464.

^d The northern Kadesh, or Kedesh, in Naphtali has the very same consonants in its modern Arabic name as in the Hebrew.

^e A writer in the *Journal of Sac. Lit.* April, 1860, connects this name with טוב, "good," from the goodness of the water supply. This is not unlikely; but his view of the name טובה, as from the same root as the Arabic

عذبة, 'Adhbeh, is very doubtful, the ع (Heb. y) being probably radical. However, if *el-Adhbeh* be, as he avers,

The mountains on the west of the 'Arabah must have been always poor in water, and form a dreary contrast to the rich springs of the eastern side in Mount Seir. From the cliff front of this last, Mount Hor stands out prominently (Robinson, *i.* 174-180). It has been suggested [HOR HAGIDGAD] that the name Ha-gidgad, or Gudgodah, may possibly be retraced in the *Wady el-Ghūdhūghidh*, which has a confluence with the *Wady el-Jerafeh*. This latter runs into the 'Arabah on the west side. That point of confluence, as laid down in Kiepert's map (Robinson, *B. R. i.*), is about fifteen miles from the 'Arabah's nearest point, and about forty or forty-five from the top of Mount Hor. On the whole it seems likely enough that the name of this Wady may really represent that of this station, although the latter may have lain nearer the 'Arabah than the Wady now reaches, and this conjectural identification has been adopted above. Jotbath, or Jotbatha,^a is described as "a land of rivers of waters" (Deut. x. 7); and may stand for any confluence of wadys in sufficient force to justify that character. It should certainly be in the southern portion of the 'Arabah, or a little to the west of the same.

The probabilities of the whole march from Sinai, then, seem to stand as follows: They proceeded towards the N.E. to the 'Ain el-Hūderāh (Hazeroth), and thence quitted the maritime region, striking directly northwards to *el-'Ain*, and thence by a route wholly unknown, perhaps a little to the E. of N. across the lower eastern spurs of the *el-Tih* range, descending the upper course of the *Wady el-Jerafeh*, until the south-eastern angle of the higher plateau confronted them at the *Jebel el-Mūkhrah*. Hence, after despatching the spies, they moved perhaps into the 'Arabah, or along its western overhanging hills, to meet their return. Then followed the disastrous attempt at or near *es-Sūfa* (Zephath), and the penal wandering in the wilderness of Kadesh, with a track wholly undetermined, save in the last half-dozen stations to Ezion-geber inclusively, as shown just above. They then marched on Kadesh the city, probably up the 'Arabah by these same stations, took it, and sent from there the message to Edom. The refusal with which it was met forced them to retrace the 'Arabah once more, and meanwhile Aaron died. Thus the same stations (Deut. x. 6, 7) were passed again, with the slight variation just noticed, probably caused by the command to resort to Mount Hor which that death occasioned.^b Thence, after

a region of abundant water, the place may correspond with Jotbath, though the name do not. His map places it about 17 miles N.W. of the modern extremity of the Gulf of 'Akabah—i. e. on the western side of the 'Arabah. His general view of the route to and from Kadesh, and especially of the site of Sinai and Mount Hor, is inadmissible. See further towards the end of this article. Burckhardt's map gives another watery spot with palm-trees in the 'Arabah itself, not far from its southern end, which might also suit for Jotbath.

^a Hengstenberg (*Authenticity of the Pent.* ii. 356) has another explanation of the deranged order of the stations enumerated just above, based on the supposition that in the two passages (Num. xxxiii. 30-35, Deut. x. 6, 7) the march proceeded in two opposite directions; but this would obviously require a reverse order of all the stations, and not the derangement of two merely. Von Ranmer thought that the line of march threaded the 'Arabah thrice through, and, making allowance for the mistake of giving it each time a nearly rectilinear direction, he is not far wrong.

reaching 'Akabah, and turning north-eastward, they passed by a nearly straight line towards the eastern border of Moab.

Of the stations in the list from Rithmah to Mithcah, both inclusive, nothing is known. The latter, with the few preceding it, probably belong to the wilderness of Kadesh; but no line can be assigned to the route beyond the indications of the situation of that wilderness given above. In the sequel to the burial of Aaron, and the refusal of Edom to permit Israel to "pass through his border"^b (which refusal may perhaps have been received at Mount Hor (Moserah), though the message which it answered was sent from the city Kadesh), occurred the necessity, consequent upon this refusal, of the people's "compassing the land of Edom" (Num. xxi. 4), when they were much "discouraged because of the way,"^c and where the consequent murmuring was rebuked by the visitation of the "fiery serpents" (v. 5, 6). There is near Elath a promontory known as the *Râs Um Haye*, "the mother of serpents," which seem to abound in the region adjacent; and, if we may suppose this the scene of that judgment, the event would be thus connected with the line of march, rounding the southern border of Mount Seir, laid down in Deut. ii. 8, as being "through the way of the plain (i. e. the 'Arabah) from Elath and from Eziongeber," whence "turning northward," having "compassed that mountain (Mount Seir) long enough," they "passed by the way of the wilderness of Moab" (v. 3, 8).

Some permanent encampment, perhaps represented by Zalmonah in Num. xxxiii. 41, 42, seems here to have taken place, to judge from the urgent expression of Moses to the people in Deut. ii. 13: "Now rise up, said I, and get you over the brook Zered," which lay further N. a little E., being probably the *Wady el-Ahsy* (Robinson, ii. 157). [ZERED.] The delay caused by the plague of serpents may be the probable account of this apparent urgency, which would on this view have taken place at Zalmonah; and as we have connected the scene of that plague with the neighbourhood of Elath, so, if we suppose Zalmonah^d to have lain in the *Wady Ithm*, which has its junction with the 'Arabah close to 'Akabah, the modern site of Elath, this will harmonize the various indications, and form a suitable point of departure for the last stage of the wandering, which ends at the brook Zered (v. 14). Dr. Stanley, who passed through 'Akabah,

^b Dr. Robinson thinks that by the "King's Highway" the *Wady Ghuweir*, opening a thoroughfare into the heart of the Edomitish territory was meant (ii. 157). Though the passage through Edom was refused, the burial of the most sacred person of a kindred people may have been allowed, especially if Mount Hor was already, as Dr. Stanley suggests, a local sanctuary of the region (*S. & P.* 97-98).

^c The way up the 'Arabah was toilsome, and is so at this day. Dr. Robinson calls it "a still more frightful desert" than the Sinaitic (ii. 184). The pass at the head of the Gulf of 'Akabah towards *et-Tih* "is famous for its difficulty, and for the destruction which it causes to animals of burden" (i. 175). Only two travellers, Laborde and Bertou, have accomplished (or recorded their accomplishment of) the entire length of the 'Arabah.

^d Von Raumer identifies it with *Maân*, a few minutes to the E. of Petra.

^e Punon is spoken of by Jerome (*Reland*, 592) as "Quondam civitas principum Edom nunc viculus in deserto, ubi aerum metalla damnatorum suppliciiis effodiuntur inter civitatem Petram et Zoaram." Athanas. *Epist. ad Solit. Vitam Agentes*, speaks of the condemnation

thus describes the spot in question (*S. and P.* 84, 85): "'Akabah is a wretched village shrouded in a palm-grove at the north end of the gulf, gathered round a fortress built for the protection of the Mecca pilgrimage. . . . This is the whole object of the present existence of 'Akabah, which stands on the site of the ancient Elath,—'the Palm-Trees,' so called from the grove. Its situation, however, is very striking, looking down the beautiful gulf, with its jagged ranges on each side. On the west is the great black pass, down which the pilgrimage descends, and from which 'Akabah ('the Pass') derives its name; on the north opens the wide plain, or Desert Valley, wholly different in character from anything we have seen, still called, as it was in the days of Moses, 'the 'Arabah.' Down this came the Israelites on their return from Kadesh, and through a gap up the eastern hills they finally turned off to Moab. . . . This is the *Wady Ithm*, which turns the eastern range of the 'Arabah. . . . It is still one of the regular roads to Petra, and in ancient times seems to have been the main approach from Elath or 'Akabah. . . . The only published account of it is that of Laborde. These mountains appear to be granite, till, as we advance northward, we reach the entrance of the *Wady Tubal*, where, for the first time, red sandstone appears in the mountains, rising, as in the *Wady el-Ain*, architecture-wise above grey granite."

Three stations, Punon,^e Oboth, and Ije-Abarim, were passed between this locality and the brook or valley of Zered (Num. xxi. 10-12, comp. xxxiii. 43, 44), which last name does not occur in the itinerary, as neither do those of "the brooks of Arnon," Beer, Mattanah, Nahaliel, and Bamoth, all named in Num. xxi. 14-20; but the interval between Ije-Abarim and Nebo, which last corresponds probably (see Deut. xxxiv. 1) with the Pisgah^f of xxi. 20, is filled by two stations merely, named Dibon-gad and Almon-diblathaim, from whence we may infer that in these two only were permanent halts made. [DIBON-GAD, ALMON-DIBLATHAIM.] In this stage of their progress occurred the "digging" of the "well" by "the princes," the successive victories over Sihon and Og, and, lastly, the famous episodes of Balaam and Phinehas, and the final numbering of the people, followed by the chastisement of the Midianites (Num. xxi. 17, xxii.-xxvi., xxxi. 1-12; comp. Deut. ii. 24-37, iii. 1-17).

One passage remains in which, although the

of a person to the mines of Phaeno, where he would only live a few days. Winer says, Seetzen took *Kalaât Phenan* for Punon, referring to *Monatl. Corresp.* xvii. 137. Laborde (*Comment. on Num.* xxxiii. 42) thinks that the place named by Jerome and Athanasius cannot be Punon, which he says lay S.E. of Petra. He adds that Burckhardt and Von Raumer took *Tzifleh* for Punon. He places Oboth "dans les décombres de Butaieh (*Bâtâhy*, Robinson), laissant ainsi Maan à droite."

^f Dr. Stewart (*T. & K.* 386) says, "The river Arnon empties itself into the Dead Sea, and between them rises the lofty Gebel Atarous, which is believed to be the Nebo or Pisgah of Scripture." He justifies this from its being the highest mountain on the Moabitish border, and from the hot spring Callirhoë being situated at its base, which seems to correspond with the Ashdoth ("springs" or "streams") of Pisgah of Deut. iv. 49. He adds that "Moses could have seen the land of Israel from that mountain." The Arnon is, without doubt, the *Wady el-Mojeb*. Ar of Moab is Arcopolis, Rabbath-Moab, now *Rabba*. [AR-MOAB AND ARNON.]

event recorded belongs to the close of Moses' life, relating to his last words in the plain of Moab, and as such lies beyond the scope of this article, several names of places yet occur which are identical with some herein considered, and it remains to be seen in what sense those places are connected with the scene of that event. The passage in question is Deut. i. 1, where Moses is said to have spoken "on this side Jordan in the wilderness, in the plain over against the Red Sea, between Paran and Tophel, and Laban and Hazeroth and Dizahab." The words "on this side" might here mislead, meaning, as shown by the LXX. rendering, *πέραν*, "across" or "beyond," i. e. on the E. side. This is a passage in which it is of little use to examine the question by the aid of maps, since the more accurate they are, the more probably will they tend to confuse our view of it. The words seem to forget that the Gulf of 'Akabah presents its end to the end of the 'Arabah ("plain,"), and to assume that it presents the length of its coast, on which Dizahab (*Dahab*) lies. This length of coast is regarded, then, as opposite to the 'Arabah; and thus the 'Arabah, in which Moses spoke, is defined by "Paran and Tophel," lying on opposite edges of the Dead Sea, or rather of the whole depression in which it lies, which is in fact the 'Arabah continued northward. Paran here is perhaps the El Paran to which Chedorlaomer came in Gen. xiv. 6 [PARAN], and probably Tophel is the well-known *Tūfilén* to the N.N.E. of Petra; and similarly the Red Sea, "over against" which it is spoken of as lying, is defined by Dizahab on its coast, and Hazeroth near the same. The introduction of "Laban" is less clear, but probably means, from its etymology, "the white," i. e. the chalk and limestone region, which in the mountain-range of *Tih*, comes into view from the Edomitish mountains (Stanley, *S. and P.* 87), and was probably named, from that point of view, by the paler contrast which it there offered to the rich and varied hues of the sandstones and granites of Mount Seir, which formed their own immediate foreground.

A writer in the *Journal of Sac. Lit.*, April,

בְּעֶבֶר הַיַּרְדֵּן בְּמִדְבַּר בְּעֶרְבָה מִזְרָח סוּף בֵּין

are the words of the Heb. text, from which the LXX. offers some divergencies, being as follows:—*πέραν τοῦ Ἰορδάνου ἐν τῇ ἐρήμῳ πρὸς δυσμαῖς πλησίον τῆς ἐρυθρᾶς θαλάσσης ἀναμέσον Φαράν Τοφόλ, καὶ Λοβὸν καὶ Αὐλῶν καὶ καταχρίσεια*. The phrase "סוּף", if "Red Sea" be, as the LXX. confirms, the true meaning, is here abridged into סוּף. The word בְּעֶרְבָה was possibly differently read by the LXX. (query, בְּעֶרְבַי, as if "the evening" were="the west," *δυσμαί*), whilst *Φαράν Τοφόλ* looks as though it were meant for one compound name; and the two last names are translated, Hazeroth being="enclosures," and *Di-zahab*="the golden." N.B. Hazeroth elsewhere is represented by *Ἀσηρώθ* (Num. xi. 35, xli. 1, 16).

Some incidental errors of this writer, though unimportant, may assist in forming an estimate of his work. Thus he identifies Petra with Bozrah, the former being the capital of the later Nabatheans, the latter that of the Edom of the prophetic period and locally distinct. Again he says, "Of all the people in the universe the race most detested by the Jews were the Idumeans." That race has generally been thought, on good authority, to be the Samaritans.

Some feeling of rivalry there no doubt was; but

1860, on *Sinai, Kadesh, and Mount Hor*, propounds an entirely original view of these sites, in conflict with every known tradition and hitherto accepted theory.^b For instance, Josephus identifies Mount Hor with Petra and Kerek; Jerome and Kosmas point to *Serbál* in the granitic mountain region as Sinai; but this writer sets aside Josephus' testimony as a wholly corrupt tradition, invented by the Rabbis in their prejudice against the Idumeans, in whose territory between Eleutheropolis, Petra, and Elath (see Jerome *on Obad.*), he asserts they all lay. [EDOMITES.] Kadesh the city, and perhaps Kadesh Barnea, did so lie, and possibly Elusa, now *el-Khālesah*, may retain a trace of "Kadesh," several types of which nomenclature are to be found in the region lying thence southward [KADESH]; but *el-Khālesah* lies too far N. and W. to be the Kadesh Barnea to which Israel came "by the way of the spies," and which is clearly in far closer connexion with Zephath (*es-Sūfa*) than *el-Khālesah* could be. On the contrary, there seems great reason for thinking that, had so well-known and historical a place as Elusa been the spot of any great event in the history of the Exodus, the tradition would probably have been traceable in some form or other, whereas there is not a trace of any. Kadesh, again, lay "in the uttermost of the border" of Edom. Now, although that border may not have lain solely E. of the 'Arabah, it is utterly inconsistent with known facts to extend it to Elusa; for then the enemies encountered in Hormah would have been Edomites, whereas they were Amalekites, Canaanites, and Amorites; and Israel, in forcing the pass, would have been doing what we know they entirely abstained from—attempting violence to the territory of Edom. The "designus" which this writer attributes to the "Rabbis," as regards the period up to Josephus' time, are gratuitous imputations; nor does he cite any authorities for this or any other statement. Nor was there any such feeling against the Idumeans as he supposes.¹ They annexed part of the territory of Judah and Simeon during the Captivity, and were subsequently, by the warlike

this writer vastly exaggerates it, in supposing that the Jewish Rabbis purposely obliterated genuine traditions, which referred these sites to Idumean territory—that of a circumcised and vanquished race who had accepted the place of "proselytes of the covenant"—in order to transfer them to what was then the territory of the purely Gentile and often hostile Nabatheans. Surely a transfer the other way would have been far more likely. Above all, what reason is there for thinking that the Rabbis of the period busied themselves with such points at all? Zeal for sites is the growth of a later age. There is no proof that they ever cared enough for Mount Hor to falsify for the sake of it. As regards *Jebel Odjme* being Sinai, the writer seems to have formed a false conception of *Odjme*, which he draws as a prominent mountain boss in the range of *Tih*, taking that range for Horeb, and the prominent mountain for Sinai. The best maps show that it had no such predominance. They give it (*e. g.* Kiepert's) as a distinct but less clearly defined and apparently lower range, falling back into the northern plateau in a N.W. direction from about the most southerly point of the *Tih*; which, from all the statements regarding it, is a low horizontal range of limestone, with no such prominent central point whatever. Russegger describes particularly the mounting by the wall-like partition of "Edjme" to the plateau of Edjme itself. "The height," he says, "which we had here to mount is in no wise considerable," and adds, "we had now arrived at the plateau" (*Reisen*, iii. 80, 81).

Maccabees, annexed themselves, received circumcision and the law, by which an Edomite might, "in the third generation," enter the congregation of Israel (Deut. xxiii. 8), so that by the New Testament period they must have been fully recognized. The Jews proper, indeed, still speak of them as "foreigners," but to them as having the place of kinsmen, a common share in Jerusalem, and care of its sanctity as their "metropolis;" and Josephus expressly testifies that they kept the Jewish feasts there (*Ant.* xvii. 10, §2; comp. *B. J.* iv. 4, §4, 5). The zealots and the party of order both appealed to their patriotism, somewhat as in our Rebellion both parties appealed to the Scots.

It remains to notice the natural history of the wilderness which we have been considering. A number of the animals of the Sinaitic region have been mentioned. [SINAI.] The domestic cattle of the Bedouins will of course be found, but camels more numerous in the drier tracts of *et-Tih*. Schubert (*Reisen*, ii. 354) speaks of Sinai as not being frequented by any of the larger beasts of prey, nor even by jackals. The lion has become very rare, but is not absolutely unknown in the region (*Negeb*, 46, 47). Foxes and hyenas, Ritter (xiv. 333) says, are rare, but Mr. Tyrwhitt mentions hyenas as common in the *Wady Mughâra*; and Ritter (*ibid.*), on the authority of Burckhardt, ascribes to the region a creature which appears to be a cross between a leopard and a wolf, both of which are rare in the Peninsula, but by which probably a hyena is to be understood. A leopard-skin was obtained by Burckhardt on Sinai, and a fine leopard is stated by Mr. Tyrwhitt, to have been seen by some of his party in their ascent of *Um Shaumer* in 1862. Schubert continues his list in the *hyrax Syriacus*, the ibex,^k seen at *Tûfîleh* in flocks of forty or fifty together, and a pair of whose horns, seen by Burckhardt (*Arab.* 405-6) at *Kerek*, measured 3½ feet in length, the webr,^l the shrew-mouse, and a creature which he calls the "spring-maus"^m (*mus jaculus* or *jerboa*?), also a *canis famelicus*, or desert-fox, and a lizard known as the *Agama Sinaitica*, which may possibly be identical with one of those described below. Hares and jerboas are found in *Wady Feirân*. Schubert quotes (*ibid.* note) Rüppell as having found specimens of *helix* and of *coccinella* in this wilderness; for the former, comp. Forskâl, *Icones Rerum Natur.* Tab. xvi. Schubert saw a fine eagle in the same region, besides catching specimens of thrush, with

^k Mr. Tyrwhitt commends the flesh of the ibex as superior to any of the deer tribe that he had ever eaten.

Or *Jabr*, *وبر*, "feli similis sine caudâ herbiphagus monticola caro incolis edulis" (Forskâl, *Descript. Anim.* v.).

^m Seetzen (iii. 41) saw holes in the earth made, he thought, by mice, in going from Hebron to Madara.

ⁿ Probably these birds have furnished a story to Pliny, of their settling by night on the yards of ships in such vast numbers as to sink them (*N. H.* x.).

^o With this compare the mention by Burckhardt (*ap.* Ritter, xiv. 333) of a great wild-dog spoken of by the Bedouins, and thought by Ritter to be perhaps the same as the *Derban* of the Hedjaz desert.

^p *لجبا*, *rana* (Freitag).

^q *حربا*, *chamaeleon* (Fr.). Mr. Tyrwhitt speaks of

stonechat and other song-birds, and speaks of the warbling of the birds as being audible from the *mimosa* bush. Clouds of birds of passage were visible in the *Wady Murrah*. Near the same tract of wilderness Dr. Stanley saw "the sky darkened by the flights of innumerable birds, which proved to be large red-legged cranes, 3 feet in height, with black and white wings, measuring 7 feet from tip to tip" (*S. & P.* 82). At *Tûfîleh* crows abound. On *Serbâl* Dr. Stewart saw the red-legged partridge (*Tent and Khan*, 117; comp. Burckhardt, *Syria*, 534); and the bird "katta," in some parts of the Peninsula, comes in such numbers that boys sometimes knock over three or four at a single throw of a stick.^a Hasselquist, who saw it here and in Egypt, calls it a partridge, smaller than ours, and of a greyish colour (204). Ritter (xiv. 333) adds linnets (?), ducks, prairie-birds, heath-cocks, larks, a specimen of finch, besides another small bird, probably red-breast or chaffinch, the varieties of falcon known as the *brachydactylus* and the *niger*, and, of course, on the coast, sea-swallows, and mews. Flocks of blue rock pigeons were repeatedly seen by Mr. Tyrwhitt.

Seetzen, going from Hebron to Madara, makes mention of the following animals, whose names were mentioned by his guides, though he does not say that any of them were seen by himself:—wolf, porcupine, wild-cat, ounce, mole, wild-ass, and three not easily to be identified, the *Selleh*, dog-shaped,^o the *Anasch*, which devours the gazelle, and the *Ikkajib*, said to be small and in shape like a hedgehog. Seetzen's list in this locality also includes certain reptiles, of which such as can be identified are explained in the notes:—*el-Melledsha*, *Umm el-Szleiman*, *el-Lidscha* or *Leja*,^p *el-Harraba* or *Hirbâ*,^q *Dscherrâr* or *Jarrâreh*,^r *el-Dâb*, otherwise *Dûde*,^s *el-Hanne* or *Hanan*,^t *el-Lîffeâ*; and among birds the partridge, duck, stork, eagle,^u vulture (*er-Rakham*), crow (*el-Grâb*), kite (*Hî-dâyeh*),^x and an unknown bird called by him *Um-Salêt*. His guides told him of ostriches as seen near *Bteiâha* on the way from Hebron to Sinai, and he saw a nightingale, but it seems at no great distance to the south of Hebron. The same writer also mentions the edible lizard, *el-Dsob*, as frequently found in most parts of the wilderness, and his third volume has an appendix on zoology, particularly describing, and often with illustrations, many reptiles and serpents of Egypt and Arabia, without, however, pointing out such as are peculiar to the wilderness. Among these are thirteen varieties of

one of these as seen by him at the entrance of *Wady es-Sheylch* on the route from Suez to Sinai by *Sûrâbâ el-Khadîm*, which appeared green in shade and yellow in sunshine.

س - و -
^r *جرارة*, *scorpionum parvorum species, scorpio fermina* (Fr.).

ع - و -
^s *ضب*, *Lacerta Aegypti* (Fr.); and *دود*, "a worm;" but this difference of signification seems to show that they cannot represent one and the same animal, as Seetzen's text would seem to intend.

س - و -
^t *حس*, *scarabaeus*. *عقاب*, *aquila*

س - و -
^u *حداية*, *milvius*.

lizard, twenty-one of serpent, and seven of frog, besides fifteen of Nile-fish. Laborde speaks of serpents, scorpions, and black-scaled lizards, which perforate the sand, as found on the eastern border of Egipt near *Tüfileh* (*Comm. on Num.* xxxiii. 42). The MS. of Mr. Tyrwhitt speaks of starting "a large sand-coloured lizard, about 3 feet long, exactly like a crocodile, with the same bandy-look about his fore-legs, the elbows turning out enormously." He is described as covered not only "in scales, but in a regular armour, which rattled quite loudly as he ran." He "got up before the dromedary, and vanished into a hole among some *retem*." This occurred at the head of the *Wady Mokatteb*. Hasselquist (220) gives a *Lacerta Scincus*, "the Scinc," as found in Arabia Petraea, near the Red Sea, as well as in Upper Egypt, which he says is much used by the inhabitants of the East as an aphrodisiac, the flesh of the animal being given in powder, and broth made of the recent flesh. He also mentions the edible locust, *Gryllus Arabicus*, which appears to be common in the wilderness, as in other parts of Arabia, giving an account of the preparation of it for food (230-233). Burckhardt names a cape not far from 'Akabah, *Räs Um Haye*, from the number of serpents which abound there, and accordingly applied to this region the description of the "fiery serpents" in Num. xxi. 4-9. Schubert (ii. 362) remarked the first serpents in going from Suez and Sinai to Petra, near *el-Hüdheráh*; he describes them as speckled. Burckhardt (*Syria*, 499, 502) saw tracks of serpents, two inches thick, in the sand. According to Rüppell, serpents elsewhere in the Peninsula are rare. He names two poisonous kinds, *Cerastes* and *Scytalis* (Ritter, xiv. 329). The scorpion has given his name to the "Ascent of Scorpions," which was part of the boundary of Judah on the side of the southern desert. *Wady es-Zuweirah* in that region swarmed with them; and De Saulcy says, "you cannot turn over a single pebble in the *Nedjd* (a branch wady) without finding one under it" (De Saulcy, i. 529, quoted in *Negeb*, 51).

The reader who is curious about the fish, mollusca, &c., of the Gulf of Suez should consult Schubert (ii. 263, note, 298, note, and for the plants of the same coast, 294, note). For a description of the coral-banks of the Red Sea, see Ritter (xiv. 476 foll.), who remarks that these formations rise from the coast-edge always in longitudinal extension parallel to its line, bespeaking a fundamental connexion with the upheaval of the whole stretch of shore from S.E. to N.W. A fish which Seetzen calls the *Alüm* may be mentioned as furnishing to the Bedouins the fish-skin sandals of which they are food. Ritter (xiv. 327) thinks that fish may have contributed materially to the sustenance of the Israelites in the desert (Num. xi. 22), as they are

now dried and salted for sale in Cairo or at the Convent of St. Catherine. In a brook near the foot of *Serbál*, Schubert saw some varieties of *elaphrus*, *dyticus*, *colymbetes*, *gyrinus*, and other water insects (*Reise*, ii. 302, note).

As regards the vegetation of the desert, the most frequently found trees are the date-palm (*Phoenix dactylifera*), the desert acacia, and the tamarisk. The palms are almost always dwarf, as described *S. & P.* 20, but sometimes the "dôm" palm is seen, as on the shore of the Gulf of 'Akabah (Schubert, ii. 370; comp. Robinson, i. 161). Hasselquist, speaking of the date-palm's powers of sustenance, says that some of the poorer families in Upper Egypt live on nothing else, the very stones being ground into a provender for the dromedary. This tree is often found in tufts of a dozen or more together, the dead and living boughs interlacing overhead, the dead and living roots intertwining below, and thus forming a canopy in the desert. The date-palms in *Wady Túr* are said to be all numbered and registered. The acacia is the *Mimosa Nilotica*, and this forms the most common vegetation of the wilder-

ness. Its Arabic name is *es-Seyál* (سِيَال), and it is generally supposed to have furnished the "Shittim wood" for the Tabernacle (Forskål, *Descr. Plant.* Cent. vi. No. 90; Celsii, *Hierob.* i. 498 foll.; Ritter, xiv. 335 foll.). [SHITTAH-TREE.] It is armed with fearful thorns, which sometimes tear the packages on the camels' backs, and of course would severely lacerate man or beast. The gum arabic is gathered from this tree, on which account it is also called the *Acacia gummifera*. Other tamarisks, beside the *mannifera*, mentioned above, are found in the desert. Grass is comparatively rare, but its quantity varies with the season. Robinson, on finding some in *Wady Sumghy*, N.E. from Sinai, near the Gulf of 'Akabah, remarks that it was the first his party had seen since leaving the Nile. The terebinth (*Pistachia terebinthus*, Arab. *Bütüm*)^a is well known in the wadys about Beersheba, but in the actual wilderness it hardly occurs. For a full description of it see Robinson, ii. 222-3, and notes, also i. 208, and comp. Cels. *Hierobot.* i. 34. The "broom," of the variety known as *retem*. (Heb. and Arab.), rendered in the A. V. by "juniper," is a genuine desert plant; it is described (Robinson, i. 203, and note) as the largest and most conspicuous shrub therein, having very bitter roots, and yielding a quantity of excellent charcoal, which is the staple, if one may so say, of the desert. The following are mentioned by Schubert (ii. 352-4)^b as found within the limits of the wilderness:—*Mespilus Aaronia*, *Colutea haleppica*, *Atraphaxis spinosa*, *Ephedra alaba*, *Cytisus uniflorus*, and a *Cynomorium*, a highly interesting variety, compared by Schubert

large turtle asleep and basking on the shore near the castle of 'Akabah, which he ineffectually tried to capture.

^a Seetzen met with it (iii. 47) at about 1 hour to the W. of *Wady el-'Ain*, between Hebron and Sinai; but the mention of small cornfields in the same neighbourhood shows that the spot has the character of an oasis.

^b Schubert's floral catalogue is unusually rich. He travelled with an especial view to the natural history of the regions visited. His tracks extend from Cairo through Suez, Ayün Mûsa, and Tôr, by way of *Serbál*, to Sinai, thence to Mount Hor and Petra; thence by Madara and Hebron to Jerusalem; as well as in the northerly region of Palestine and Syria. His book should be consulted by all students of this branch of the subject.

^a Mr. Wilton (*Negeb*, 51) interprets "flying," applied (Isa. xxx. 6) to the serpent of the South, as "making great springs;" and "fiery" as either denoting a sensation caused by the bite, or else "red-coloured;" since such are said to have been found by several travellers whom he cites in the region between the Dead and Red Seas.

^b A number of these are delineated in Forskål's *Icones Herum Nat.* among the later plates: see also his *Vermes*, iv. *Corallia Maris Rubri* (*ibid.*). Also in Russegger's atlas some specimens of the same classes are engraved. Schubert (ii. 370) remarks that most of the fish found in the Gulf of 'Akabah belong to the tribes known as *Acanthurus* and *Chaetodon* (Hasselquist, 223). He saw a