ART. XXI. — *On a system of Letter-numerals used in South India.* By CECIL BENDALL.

I TRUST that English readers will have before them ere long a full account of the very important "Encyclopaedia of Indian Research" (Grundriss der Indo-Arischen Philologie), at present in course of publication by K. Trübner of Strassburg, under the editorship of Dr. Bühler. A copy of the editor's own extremely weighty contribution on "Indische Palaeographie" has, together with its accompanying set of excellent plates, reached me by the author's kindness. At his request I now draw attention to an omission in his chapter on the denotation of numerals (VI. Zahlenbezeichnung, pp. 73–83).

One of the systems for numeration in India is syllabic (*akṣarapallī*), as contrasted with the ordinary decimal system (*anṅkapallī*). The main features of these systems have been often explained (*Ind. Ant.*, vi, pp. 42, 143; Burnell, "South Indian Palaeography," ed. ii, p. 65; and an article by the late Sir E. C. Bayley in our own Journal, n.s., vols. xiv, xv), but the origin of the syllabic notation still remains obscure, as Dr. Bühler (who has changed his views on the general subject) admits (*op. cit.*, p. 78). He traces it (p. 74) down to the sixteenth century only. This being so, it is well worth pointing out that in Malabar, a part of India already identified with curious survivals of ancient usage, the syllabic system has been used within the present century, and possibly is still known.

The silence of the writers of Malayalam grammars for Europeans, from R. Drummond (1799) to L. J. Frohn-meyer (1889), need not surprise us. They are mere practical manuals, the last-named writer (pref., p. v) expressly disclaiming any provision for the needs of

“students of Comparative Philology.” What is curious is, that Burnell knew nothing of the system; for in his great work already cited, after discussing the syllabic system, he observes (p. 67) that he has not met with any examples in South India later than the fifth century A.D. In the “Grammar of the Malayalam Language,” however, by H. Gundert (2nd ed., Mangalore, 1868), written for native students in Malayalam, with section-headings only in English, the following list is given (§ 148a, pp. 41-2):—

1 ന	na	10 മ	ma	100 ഞ	ñā.
2 ന്ന	nna	20 ത	tha	(200, 300,	
3 ന്യ	nya	30 ല	la	etc., not in-	
4 ശ്ക	ška	40 പ്ത	pta	dicated.)	
5 ശ്ഹ	jhra	50 ബ	ba		
6 ഹ (ഹ MS.)	hā (ha)	60 ത്ര	tra		
7 ഗ്ര	gra	70 രൂ (രൂ MS.)	rū (tru)		
8 പ്ര	pra	80 ഷ	ca		
9 ദ്ര	dre (?)	90 ണ	ṇa.		

The British Museum (Add. 7,134) possesses a Sanskrit MS. (of the drama Anargharāghava) written in Malayalam character, and bearing leaf-numbering on the above system. It is undated, but from its appearance it may well have been written shortly before the year it was presented to the Museum, 1829.

The forms for 1-3 (*na*, *nna*, *nya*) are peculiar to this system.

They are not, however, borrowed from the ordinary decimal figures.

4 is not *nika*, but *ška*. Compare Bhagavanlāl in *Ind. Ant.*, vi, p. 44, col. 9, and p. 46 (*ška*). There is perhaps an *r*-sign in Bühler's Tafel ix, col. 9, No. 4.

For 5=*jhra*, a curious combination, it is not so easy to find a parallel, owing to the rarity of *jha* even as a simple letter. The resemblance, however, between some of the Kṣatrapa forms of 5 and the contemporary forms of *jha* (Bühler, Tafel iii, line 14) is enough to account for the confusion or misreading.

For 6=*hā* (Gundert) our MS. has simply *ha*. Both are doubtless derived from a form *pha*, the characters of these letters being very similar in Malayalam (𑌒𑌓 *pha*, 𑌒𑌔 *ha*).

7=*gra*; agrees with the results given by Bühler, p. 75.

8=*pra*. Here 𑌒 is doubtless a misreading for *hra* 𑌒. In many of the early alphabets the resemblance between *pa* and *ha* is considerable.

9. I take this to be an old form of *o*, though at present it looks like *dre*. I am not sure that some of the Nepalese forms of 9 given in my Cambridge Catalogue ("Table of Letter-numerals") do not show an analogous corruption.

10=*ma* is somewhat difficult to explain. Bühler explains the earlier forms as =*thū*. The modern Mal. forms of *thu* *thū* (𑌒𑌓 𑌒𑌔) are not specially like *ma* 𑌒. Is it possible that the *ma* arose from an identification of the early forms 𑌒𑌓, etc., with an *m* (𑌒𑌓 𑌒𑌔, etc.) laid on its side?

20 *tha*, 30 *la*, 40 *pta* present no difficulty.

50=*ba*. I cannot suggest an explanation.

60 *tra* and 70 *tru* (MS. form) are also obscure. They may rest on a misreading of some of the earlier cursive signs (Bühler, Tafel ix, cols. 3-11). Compare also some of the Kṣatrapa symbols (Bhagavanlāl in *Ind. Ant.*, l.c.), in which the mutual relation of the two signs is much like that of the two before us. Gundert's 𑌒 *rū* is doubtless a secondary confusion from the form in the MS.

The signs for 80 (*ca*) and 90 (*na*) could probably be explained if we knew how the paṇḍits of Malabar write Upadhmāniya (the labial sibilant disused in literature, but often found in inscriptions). It will be interesting to note whether any reader in the "Benighted" Presidency takes enough interest in the matter to obtain for us this information. It may be noted that signs for *ca*, not only in Mal. (𑌕𑌃), but also in some of the earlier Grantha alphabets (Burnell, "South Indian Palaeography," plates xiii, xiv), bear some resemblance to the "80" of Bühler's Table, cols. 17, 18.

100 = *ṇa*. The character 𑌕𑌃 *ṇa* somewhat resembles 𑌕𑌃 *A*.

I may note in conclusion that the ordinary leaf-numbering of MSS. from Malabar is in accordance with a system also unknown to Burnell as regards that country, but described by him ("South Indian Palaeography," p. 68) for Tamil documents only. As he notes, the system is interesting as forming a middle stage between the *akṣara-palli* and the ordinary decimal notation. Gundert (*supra cit.*) gives all three systems. J. Peet, in his grammar written in 1860, gives the two last, stating (p. 95) that the decimal system was "introduced by Europeans"; but in the "Outlines of Grammar," published by F. Spring in 1839, only the decimal system is given.

The Sinhalese, as my friend Vikramasimha reminds me, have also an *akṣara*-system. This might, no doubt, be easily worked out from the earlier Sinhalese epigraphy. I note, in passing, the forms of 4, 7, and 30, which appear to correspond to forms of *ṇka*, *gra*, and *la* respectively.