

the second and third are inserted one upon either side of the base of the first phalanx of the medius; and the fourth is inserted upon the outer side of the base of the first phalanx of the annularis. The two exceptions to this rule are—(1) the Gorilla, and (2) the Lemur.

Bischoff¹ has recently shown that in the Gorilla the pedal dorsal interossei are arranged in the same manner as in the human foot, viz., with reference to a line drawn through the index or second toe. Duvernoy² and Macalister,³ however, differ from Bischoff upon this point, and consider the foot of the Gorilla no exception to the general rule, and therefore it is possible that the disposition of these muscles in this animal may vary.

In the Lemur I find that the dorsal interossei are arranged with reference to a line drawn through the annularis. The first is inserted upon the inner side of the base of the index; the second upon the same side of the base of the medius; and the third and fourth upon either side of the base of the annularis. This is very evident when these muscles are dissected from the dorsal aspect of the foot.⁴ In the manus the dorsal interossei are arranged upon the same plan. Duvernoy considers the peculiarity of arrangement in the human foot to be due to the fact that the index which constitutes the centre for the movements of abduction and adduction is the longest of the toes. It is interesting to note in connection with this that the annularis is the longest digit in the foot of the Lemur. In the Gorilla, on the other hand, the medius is the longest toe.

BIMANA.

We must now endeavour to determine the relation which exists between the intrinsic muscles of the human foot, and those of the feet of the lower animals. There is no difficulty in recognising the members of the dorsal layer. They are—

1. The abductor hallucis.
2. The abductor minimi digiti.
3. The occasional abductor ossis metatarsi minimi digiti.
4. The four dorsal interossei.

The plantar layer is represented by (1) the adductor hallucis, and (2) the transver-

¹ Beiträge zur Anatomie des Gorilla—Aus den Abhandlungen der K. bayer Akademie der W. II., clxiii. Bd. iii. Abth.

² *Loc. cit.*

³ *Loc. cit.*

⁴ This is very clearly and beautifully represented in plate lxxv. (figs. 1 and 2) of the Atlas (vol. ix.), which accompanies the text (vol. vi.) of the great work which has recently appeared entitled "Histoire Physique, Naturelle et Politique de Madagascar," by M.M. Alph. Milne-Edwards and Alfred Grandidier. In the text of vol. vi. which is devoted to the Lemurs, reference is made in page 191 to this disposition of the dorsal interossei, but the authors hardly seem to have realised its full importance. They say:—"Dans l'intervalle qui sépare le troisième métatarsien du quatrième, et celui-ci du cinquième orteil existent deux interosseux dorsaux qui se fixent de chaque côté de la première phalange du quatrième orteil." In the case of the manus it is neither figured nor described.