It needs no comment that it is at the least rather hazardous to identify with the Mediterranean species (which seems also to have been examined and figured by Quatrefages when he gave the description of his *Cerebratulus crassus*), a specimen in which the proboscis, as well as its armature, is absent. Still the transverse sections offer such a very close resemblance to those of actual specimens of *Drepanophorus serraticollis*, that it would be again hazardous to establish a new species for the fragments, of which the coloration affords a less decisive clue than in the case of the foregoing *Drepanophorus rubrostriatus*—the madder-brown hue referred to by M'Intosh being all that is preserved of the uniform though bright coloration which the specimen must have had when alive, if it agreed in this respect with the Mediterranean *Drepanophorus serraticollis*.

I have, moreover, hazarded the identification with the foregoing specimens of a third fragment collected in the Kerguelen waters, of which not only the proboscis but also the head was absent. Here, too, the internal characters enabled me to refer the specimen to the genus *Drepanophorus* (the transverse cæca of the proboscidian sheath being in this case the guiding feature).

The systematic position of this specimen thus only rests upon the similarity of the transverse sections and on the general yellow hue of the fragment, darker on the dorsal than on the ventral surface.

The very thick-walled proboscidian sheath with its delicate lateral sacs, different in certain respects from that of a new species of *Drepanophorus* hereafter to be described, is figured on Pl. X. fig. 5.

Drepanophorus lankesteri, n. sp. (Pl. I. fig. 22; Pl. IX. figs. 1, 2, 10; Pl. X. figs. 2, 4; Pl. XII. figs. 5; Pl. XIV. figs. 9, 10; Pl. XV. fig. 13).

Of the three species of *Drepanophorus* contained in the Challenger collection, this is without doubt in several respects the most remarkable. One specimen measuring 30 mm. in length and 3½ mm. in breadth was obtained; it was dredged at Station 49, in the waters of Nova Scotia. As to its colour when alive, the spirit specimen allows of no other certain conclusion than that the dorsal surface is darker than the ventral, which may have been whitish. No special markings are now traceable on the dorsal integument, and we may thus surmise that its natural colour, which has been only partly preserved in spirit, was in life brown or red.

If I nevertheless feel justified in creating it a new species, it is because certain internal characters are so well marked as to allow of no confusion with the species of *Drepanophorus* hitherto known.

The two characteristic features which immediately attract attention in studying a series of sections through this species are, first, the presence of a series of transverse commissures (Pl. IX. fig. 10) metamerically placed at intervals of about 0·2 to 0·15 mm., and connecting the two longitudinal nerve-stems all along their course below the intes-