14.—*Diagnoses of New Species of Marine Fishes from South African Waters.*—By K. H. Barnard, M.A., F.L.S., Assistant Director.

The following diagnoses of new species of Fishes are the result of an examination of the Collection of Fishes in the South African Museum. When the whole collection has been thoroughly examined there will probably be some more species to be described, but it is thought that these should be published as soon as possible with a view to aiding the work being done on the Fishes of this region by other workers.

CYCLOSTOMATA.

Family MYXINIDAE.

Heptatretus profundus, n. sp.

Five gill-openings. Teeth, 11 in outer, 10 in inner row, the anterior 3 in the outer, the anterior 2 in the inner, row, basally fused. Head (*i.e.* from nostril to first gill-opening) $4\frac{3}{4}$ times, depth of body (at level of gill-openings) 12 times in total length. Ventral fin ending at a great distance (100 mm.) behind last gill-opening. 620 mm. Dark brown.

Off Cape Point, 400 fathoms. s.s. *Pieter Faure.*

The forward position of the gills at once removes any doubt as to this specimen being merely a five-gilled aberration of the Common South African Hag (*H. hexatrema*). The second gill-pouch on the left side is degenerate, being only about a quarter of the size of the others. This is the first record of a five-gilled *Heptatretus* and the deep-water habitat is exceptional for a member of this genus.

Heptatretus octatrema, n. sp.

Eight gill-openings. Teeth 10 in both rows ; the anterior 3 in the outer, the anterior 2 in the inner, row, basally fused. Head 4 times, depth of body 25 times in total length. Ventral fin ending only a short distance (8–10 mm.) behind last gill-opening. 300 mm. Brownish.

Agulhas Bank, 25–40 fathoms. s.s. *Pieter Faure.*

Easily distinguished by its greater slenderness from the Japanese *okinoseanus*, Dean, 1904, the only other known species with eight gill-openings.

ELASMOBRANCHII.

Family RAIIDAE.

Raia spinacidermis, n. sp.

♀, shape of *microps* (Günther, Challeng. Rep. I, Plate IV), but a little broader in proportion to length, and snout sharper. Width equal to distance from snout to middle of tail. Snout pointed but not produced, about 90°, anterior margin almost straight, outer pectoral angle broadly rounded, hind margin convex. Eye a little less than interorbital width, which is $3\frac{3}{4}$ in preocular length of snout. Internasal width less than distance of nostril from tip of snout. Rostral cartilages narrow and slender, united for a little more than half their length. Anterior rays of pectoral reaching to 25 mm. from tip of snout. Tail a little shorter than length of body; the lateral cutaneous fold confined to the posterior third. Teeth 60, the median ones slightly pointed. Whole upper surface of disc and upper and lateral surfaces of tail covered with closely-set fine setiform spinules (resembling the skin of *Spinax*, whence the name), larger and closer on the tail than elsewhere; large spines entirely absent; lower surface of tip of snout with a few spinelets, lower surface of tail, except the median line of the basal two-thirds, with setiform spinules similar to those on upper surface. 600 mm. Pale slaty-grey, becoming slightly darker towards hinder margins of pectorals and distinctly darker on pelvics. Lower surface similar to upper.

Exact locality unknown. s.s. *Pieter Faure.*

This hitherto undescribed species is represented by a ♀ only, and is noteworthy for the entire absence of enlarged spines.

ISOSPONDYLI.

Family ALEPOCEPHALIDAE.

Alepocephalus australis, n. sp.

Depth of body $5\frac{3}{4}$–6, length of head 3 in length of body. Greatest depth at level of pectoral. Eye equal to snout, not quite twice

interorbital width, $3\frac{3}{4}$ in length of head, $10\frac{1}{2}$–11 in length of body. Eye touching dorsal profile, interorbital space flat or slightly concave. Maxilla posteriorly enlarged, extending to vertical from centre of eye. Opercular flaps voluminous, overlapping. D 16–17, A 16–17. Dorsal commencing opposite vent, slightly in advance of anal, which commences behind middle of body. P 10. Caudal peduncle $2\frac{3}{4}$ times its greatest depth. Scales: l. l. 53–55; l. tr. 13–14. Gill-rakers 14 on lower part of anterior arch. Pyloric caeca (14–) 15. Up to 325 mm. Deep violet black on head, lighter on body.

Off Cape Point, 630 fathoms. s.s. *Pieter Faure.*

This species is closely allied to *blandfordi* Alck. (1892) from the Arabian Sea, but differs in the slightly larger eye, the maxilla extending farther back, the fewer scales, and the more slender caudal peduncle. Described from two specimens, 325 and 280 mm. long, and from three somewhat mutilated young specimens.

APODES.

Family SYNAPHOBRANCHIDAE.

Diastobranchus, n. g.

Dorsal commencing behind vent, which is less than a head's length distant from gill-slits. Pectoral considerably longer than snout. Gill-slits ventro-lateral, oblique, separated. Tail more than 3 times length of body to vent. Scales extending over head and cheeks. The patch of teeth on front of vomer distinctly separated by a gap from the single series on the hinder part, the first two teeth of which are conical and larger than any of the other teeth in the mouth.

Except for the separate gill-slits, the species for which this new genus is proposed, might well go into *Synaphobranchus*, as the forward position of the vent is not by itself of sufficient importance to be considered a generic character. In the short extension of the cleft of the mouth behind the eye it resembles *Ilyophis*.

Diastobranchus capensis, n. sp.

Depth of body 3 (adult)–4 (juv.), length of head (to pectoral) $1\frac{2}{3}$–$1\frac{3}{4}$ in length of body (to vent). Length of body $4\frac{3}{4}$–5 in total length. Eye 2–$2\frac{1}{4}$ in snout, 1–$1\frac{1}{4}$ in interorbital width, 6–7 in length of head. Mouth not more than twice length of snout, extending not more than an eye's length behind posterior margin of eye, $1\frac{2}{3}$ in length of head.

Dorsal commencing about $\frac{2}{3}$ of a head's length behind vent. Pectoral inserted considerably nearer vent than tip of snout, $\frac{1}{2}$–$\frac{2}{3}$ as long as head, extending to or almost to vent, pointed. Gill-slits separated at their anterior ends by a space equal to the length of one gill-slit. Teeth in jaws as in *Synaphobranchus pinnatus*; teeth on front part of vomer enlarged, conical, in an oval patch, separated by a space from the single series on the hind part of the vomer, the first two teeth of which are also conical and larger than any of the others. Up to 790 mm. Blackish-brown, the branchial region with a violet tinge, mouth blue-black.

Off Cape Point, 470 fathoms. s.s. *Pieter Faure.*

Described from several specimens from 240 mm. upwards, in excellent condition. The food consists of various Crustacea.

Family CONGRIDAE.

Congermuraena albescens, n. sp.

Depth of body about 5, length of head nearly 3 in length of body to vent. Length of body to vent about $1\frac{1}{4}$ in distance from vent to tip of tail. Eye $1\frac{1}{2}$ in snout and in interorbital width, $5\frac{1}{2}$ in length of head. Dorsal commencing above middle of pectoral, which is $3\frac{3}{4}$ in length of head. Lips rather thick and fleshy, upper jaw slightly longer than lower, but snout not projecting, cleft of mouth extending to below centre of eye. Teeth in about 4 series on jaws and vomer; maxillary and mandibulary bands 4 mm. wide (wider in front), vomerine band elongate ovate, 6 mm. wide, extending back beyond tip of tongue and almost to level of front margin of eye; the teeth mostly conical, but the inner ones more or less tubercular with rounded tops, the vomerine teeth especially so. Length of gill-slit $2\frac{1}{2}$ in interspace. 700 mm. Yellowish-white, vertical fins without any traces of dark edging.

Off Cape Point, 250 fathoms. s.s. *Pieter Faure.*

Congermuraena australis, n. sp.

Depth of body about 7, length of head $2\frac{1}{2}$ in length of body to vent. Length of body about $1\frac{1}{2}$ in length of tail. Eye nearly equal to snout, twice interorbital width, $4\frac{1}{2}$–5 in length of head. Dorsal commencing immediately behind origin of pectoral, which is 3 in length of head. Lips thick and fleshy, snout overlapping lower jaw by at least half the

diameter of eye, cleft of mouth extending to below anterior third of eye. Vomerine teeth extending back to tip of tongue, *i.e.* not as far as front margin of eye ; about 3 series in each band, more numerous in front, some of the vomerine teeth subtubercular. Length of gill-slit half the interspace. Vertebrae about 136. Up to 375 mm. Brownish, the vertical fins with dark edging.

Coast of S.W. Africa, off Cape Peninsula, False Bay, Tristan d'Acunha, 2–60 fathoms.

This species resembles *mystax* in the longer tail proportionately to the head and trunk, and in the projecting snout and thick lips ; but it has the vertical fins with black edging as in *balearica*, and is intermediate between the two northern species in the number of vertebrae.

As is evident from a series of Leptocephali in the South African Museum, this is the adult of the form described by Kaup as *Leptocephalus capensis.*

Family DYSOMMIDAE.

Dysomma anguillaris, n. sp.

Length of body to vent 5 times in length of tail. Length of head (to gill-slit) 7 in total length. Head flat above. Eye 4 in snout, $3\frac{1}{2}$ in interorbital space. Snout overlapping lower jaw, $4\frac{1}{2}$ in length of head. Lips thick and fleshy. Cleft of mouth extending 2 eye diameters behind eye. Posterior nostril almost as large as eye. Pectoral about $4\frac{1}{2}$ in length of head. Dorsal commencing above or slightly in advance of gill-slits, which are subequal to the interspace between them. Distance of vent from posterior end of gill-slit equal to length of one gill-slit. A narrow band of villiform teeth on posterior $\frac{2}{3}$ of maxilla ; 2 conical teeth, set transversely in front of upper jaw, followed by 4 canine teeth on vomer, the third being the largest ; 7–8 canine teeth on each mandible, set well apart, but not so large as those on vomer ; each of the canine teeth is set in an oval, conical, fleshy papilla with only its point projecting. Snout and lower jaw thickly covered with minute villiform papillae. 360 mm. Silvery-white, base of vertical fins posteriorly dark, but the edges white.

Off Tugela River mouth, Natal, 63 fathoms. s.s. *Pieter Faure.*

The elongate form at once distinguishes this species from the only other known species of the genus : *bucephalus*, Alck. 1889. The body cavity extends to within 70 mm. of the end of the tail, but the intestinal loop only extends to about the middle of the total length of the body. The stomach contained portions of Crabs.

Family OPHICHTHYIDAE.

Ophichthys triserialis, n. sp.

Length of head 2½ in distance from gill-slits to vent. Tail three-quarters as long again as body. Snout conical, somewhat depressed. Cleft of mouth moderate, not extending beyond hind margin of eye. Lips not fringed. Eye 2 in snout, subequal to interorbital width. Teeth pointed, subequal, but largest in front of upper jaw, triserial in both jaws and on vomer. Dorsal commencing just behind end of pectoral, which is 4 in length of head. 300 mm. Uniform brownish, vertical fins with dark margins posteriorly.

Algoa Bay, 55 fathoms. s.s. *Pieter Faure.*

This specimen bears a very close resemblance to *unicolor* which was also described from Algoa Bay. The difference in the teeth is indeed the only important distinguishing character, but in this respect the specimen is clearly distinct from the type of *unicolor* which I have examined in the British Museum.

Sphagebranchus acuticeps, n. sp.

Body cylindrical. Depth of body 4½ in length of head. Length of head a little over 3 in distance from gill-slits to vent. Tail only a very little longer than rest of body. Cleft of mouth 3 in length of head. Snout pointed, projecting, 4½–5 in head. Eye about in middle of cleft of mouth, well developed but small, about 4 in snout, subequal in length to interorbital width. Gill-slits longitudinal, parallel, subequal in length to snout. Branchiostegal membranes rather swollen. Teeth rather large, pointed, lancet-shaped, recurved, uniserial, 15 in upper jaw, 12 on vomer and in lower jaw, 3 in a triangle in front of upper jaw, the vomerine series extending back beyond tip of tongue, which is free. 188 mm. Brown, eyes black.

Off Tugela River mouth, Natal, 37 fathoms. s.s. *Pieter Faure.*

Very like *vulturis*, Weber & Beauf, 1916, but differing in the proportions.

INDEX.