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RESULTS OF THE ARCHBOLD EXPEDITIONS.
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FRESH-WATER FISHES FROM CAPE YORK,
AUSTRALIA

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The Richard Archbold Cape York expedition of 1948, though primarily interested in mammals, obtained a small collection of fresh-water fishes as opportunity offered, which are of considerable interest owing to the scarcity of such recently collected material from this area, and its proximity to New Guinea. The collection comprises 11 species, as listed below. One, and the race of another, of these appear to be previously undescribed.

***Nematalosa erebi* (Günther)**

Chatoessus erebi GÜNTHER, 1868, Catalogue of fishes, vol. 7, p. 407.

Four specimens of between 105 and 115 mm. standard length from the Coen River (Gulf drainage), at an elevation of 700 feet, August 7.

***Copidoglanis hyrtlil* (Steindachner)**

Neosilurus hyrtlil STEINDACHNER, 1867, Sitzber. Akad. Wiss. Wien, vol. 55, p. 14, pl., figs. 3, 3a (text ref. pl. 1, figs. 4, 5 incorrect).

Ten specimens between 85 and 145 mm. standard length from the Archer River (Gulf drainage), Wenlock Crossing, elevation 400 feet, July 30 and 31.

***Melanotaenia nigrans* (Richardson)**

Atherina nigrans RICHARDSON, 1843, Ann. Mag. Nat. Hist., vol. 11, p. 180.

Twenty specimens of between 40 and 95 mm. standard length

from Brown's Creek, Pascoe River (Pacific drainage), at an elevation of 200 feet, July 17 and 18; two of between 35 and 95 mm. from the North Claudie River (Pacific drainage) at little elevation, June 26. Eight specimens of between 25 and 60 mm. from the Archer River (Gulf drainage), Wenlock Crossing, elevation 400 feet, July 31. Also six young of between 30 and 45 mm. (species provisional) from Musgrave, elevation 400 feet, August 29 (pools on Pacific side of divide), and Ebagoola, elevation 900 feet, August 27 (pools on Gulf side of divide).

Melanotaenia carteri (Whitley)

Aidaprora carteri WHITLEY, 1935, Rec. Australian Mus., vol. 19, p. 224.

Three specimens of between 45 and 85 mm. standard length from the Archer River (Gulf drainage), Wenlock Crossing, elevation 400 feet, July 30 and 31; six of between 80 and 95 mm. from the Coen River (Gulf drainage), elevation 700 feet, August 7.

Glossamia gillii (Steindachner)

Apogonichthys gillii STEINDACHNER, 1867, Sitzber. Akad. Wiss. Wien, vol. 55, pt. 1, p. 11, pl., fig. 2 (text ref. pl. 1, fig. 1 incorrect).

Three specimens of between 35 and 70 mm. standard length, two from Brown's Creek, Pascoe River (Pacific drainage), elevation 200 feet, July 18; one from the Archer River (Gulf drainage), Wenlock Crossing, elevation 400 feet, July 31.

Ambassis reticulata Weber

Ambassis interrupta var. *reticulatus* WEBER, 1913, Nova Guinea, vol. 9, livr. 4, p. 574. New Guinea.

Two specimens of between 45 and 50 mm. standard length, from the Archer River (Gulf drainage), Wenlock Crossing, elevation 400 feet, July 31.

Therapon unicolor Günther

Therapon unicolor GÜNTHER, 1859, Catalogue of fishes, vol. 1, p. 277.

Eighteen specimens of between 45 and 70 mm. standard length from the Archer River (Gulf drainage), Wenlock Crossing, elevation 400 feet, July 30 and 31; one of 84 mm. from the Coen River (Gulf drainage), elevation 700 feet, August 7; two of between 40 and 50 mm. from Ebagoola, elevation 900 feet, August 27, pools Gulf side of divide; and two between 40 and 75 mm. from

Musgrave, elevation 400 feet, August 29, pools Pacific side of divide.

***Therapon bidyana* (Mitchell)**

Acerina Cernua bidyana MITCHELL, 1838, Three expeditions into the interior of eastern Australia, vol. 1, p. 95, pl. 8.

Pelates Römeri WEBER, 1910, Notes Leyden Mus., vol. 32, p. 233. New Guinea.

Nine specimens of between 60 and 110 mm. standard length from the Archer River (Gulf drainage), Wenlock Crossing, elevation 400 feet, July 30.

I identify these with *Pelates römeri* from New Guinea, and they are presumably *T. bidyana* as recognized elsewhere in Australia.

***Therapon percoides yorkensis*, new subspecies**

Therapon fasciatus, CASTELNAU, 1878, Proc. Linnean Soc. New South Wales, vol. 3, p. 46, Norman River; not *T. fasciatus* Castelnau, 1876, Recherches on fishes of Australia, p. 11, Swan River.

Characterized by small mouth, pointed snout, the top of the upper jaw on a level with the lower margin of the eye, high scale count, and bold colors. Dorsal, XIII (rarely XII), 9 or 10. Anal, III, 8 or 7. Scales, 41 to 47 (average 44). Four narrow, vertical black bands from back across sides, the first just behind head, fourth from a semi-oval blotch in the center of soft dorsal base to last anal rays; a fifth variable, more or less imperfect band on side of peduncle, and sixth blotch or bar on caudal base.

DESCRIPTION OF TYPE: No. 18535, the American Museum of Natural History, from the Coen River, Cape York, Australia, at 700 feet elevation, August 7, 1948, collected by G. M. Tate and H. M. Van Deusen.

Length to base of caudal, 75 mm. Depth in this length, 2.6; head, 3.2. Eye in head, 3; snout, 3; interorbital, 3.5; maxillary, 4; width of body, 1.7; least depth of peduncle, 2.5; its length, 2.2; longest dorsal spine, 1.5; dorsal ray, 2.2; anal spine, 1.6; anal ray, 2.2; length of caudal, 1.4; of pectoral, 1.5; ventral, 1.4; its spine, 2.1.

Dorsal, XIII, 9; anal III, 8. Scales (lateral line), 45. Gill-rakers (on lower limb), 13.

Compressed, back elevated, snout pointed, upper outline more convex than lower. Profile almost evenly convex, slanting up straight to over eye where there is a slight backward angle, then a

slight upward angle at the rounded nape. Mouth small, little oblique, the lower jaw appreciably included; maxillary concealed except for its end, to under posterior nostril. Nostrils well separated, the anterior nearer the edge of preorbital than to the posterior, which is not far from the front border of the eye. A series of close-spaced, blunt conical teeth in jaws, and band of small teeth behind it. Preopercle with strong serrae; opercle with one or two spines, the upper obscure. Gill-rakers short and thick.

Dorsal spines strong, the first small, and increasing in length to the fifth which is about four times the first, fifth to seventh subequal, then decreasing to next to last which is about one-half as long as the fifth and appreciably shorter than the last. Anal spines strong and heavy, the second about twice the first and appreciably longer than the third. Caudal emarginate. Ventral origin about under that of dorsal, and behind pectoral base. Ventrals pointed, not reaching vent when depressed; pectoral very bluntly pointed.

Moderate-sized ctenoid scales on back and sides; somewhat smaller scales on breast, opercle, cheek, postorbital, and apparently a few on base of preopercle; top of head, preorbital, snout, and jaws scaleless. Lateral line normal. Spinous dorsal, front of soft dorsal, and entire anal with a basal sheath of scales; small scales on the base of caudal which extend rather well out near its upper and lower margins. Tips of four sharp spines on hind edge of suprascapular (post-clavicle) exposed. No enlarged ventral axillary scale.

General color (in alcohol) dark along the back, becoming pale on lower surfaces. Four narrow, black, vertical cross bands downward from the back, the first close behind the head, its narrowed lower end curving backward slightly to behind the pectoral base, crossing about two-thirds the depth of body; the second and third crossing more nearly four-fifths the depth; the fourth is complete from the center of the soft dorsal onto the base of the posterior anal rays. In addition there are a more or less vertical black blotch on the peduncle and another on the base of the caudal. A dark lengthwise streak from edge of preorbital across cheek below eye. Spinous dorsal dusky, especially the membranes; soft dorsal with a basal semi-oval black blotch confluent with the fourth cross band, a vague dusky central band, and dark front margin and tip; anal pale, irregularly dusky on its front rays;

caudal pale with a black lower border, narrowly dusky upper border, broken dark stripes paralleling these inward, and two faint cross bars indicated across the middle of the fin. Outer rays of ventral dusky, inner pale; pectoral pale with a faint dusky cross mark on its base.

Nineteen specimens of between 40 and 90 mm. standard length from the Gulf side of the divide; 11 of between 45 and 90 mm. from the Archer River at 400 feet elevation, July 30; seven of between 55 and 75 mm. from the Coen River at 700 feet, August 7; one of between 40 and 45 mm. from pools at Ebagoora, 900 feet, August 27.

Their depth varies between 2.5 and 2.6 irrespective of size (2.8 in an exceptional one of 60 mm.). The color pattern is reasonably constant. A dark stripe from eye to snout is frequently appreciable. Especially in the Coen River material, a central and two lateral curving narrow dark stripes may be present on top of the head. The peduncular band may be complete or merely a blotch, the blotch on base of caudal a vertical bar or a round spot. The caudal is sometimes variously spotted or streaked with black, and its dark cross marks, present in the type, are absent in other specimens. The interspaces between the four main cross bands on the sides are sometimes variously marked with dusky, with a suggestion of central lengthwise band posteriorly in some Archer River specimens. These do not look exactly like those from the Coen River, and sufficient comparable series would probably show some population differences.

This is probably the race Castelnau had from the Norman River, but it is very unlikely that it is the one he described earlier from the Swan River in southwestern Australia. There is no reason to suppose that *Datnia fasciata* Steindachner, 1867 (Sitzber. Akad. Wiss. Wien, vol. 56, pt. 1, p. 322), obviously a *T. percooides* with prior claim to the name "*fasciatus*," is this Cape York fish. Whereas Ogilby and McCulloch, 1916 (Mem. Queensland Mus., vol. 5, pp. 106-107), are probably right that *percooides* shows minor population variations best disregarded in taxonomy, it will prove advantageous to recognize a few of the major geographic variations.

ARCHERIA, NEW GENUS

This genus is proposed for a fish so closely resembling *Gilbertia jamesoni* (Ogilby) in shape, color, miscellaneous characters, and

appearance that it might easily be mistaken therefor. However, it has 12 versus 10 dorsal spines and a much weaker mouth with reduced dentition. It appears to be a less actively free-swimming fish somewhat related to *Therapon percoides*, but with sufficient aberrant characters (projecting lower jaw, elevated nape, etc.) to take it out of the genus *Therapon*.

***Archeria jamesonoides*, new species**

A theraponid resembling marine *Gilbertia jamesoni* (Ogilby) in shape, color, and appearance, but with smaller, weaker mouth and different fin formulae.

DESCRIPTION OF TYPE: No. 18533, the American Museum of Natural History, from the Archer River, Cape York, Australia, at Wenlock Crossing, 400 feet elevation, July 31, 1948, collected by G. M. Tate and H. M. Van Deusen.

Length to base of caudal, 52 mm. Depth in this length, 2.4; head, 2.8. Eye in head, 3.3; snout, 3.5; interorbital, 4; maxillary, 3.2; width of body, 2; least depth of peduncle, 2.8; its length, 2.8; longest dorsal spine, 2.3; dorsal ray, 2.5; anal spine, 2.4; anal ray, 2.5; length of caudal, 1.6; of pectoral, 1.5; ventral, 1.5; its spine, 2.5.

Dorsal, XII, 13; anal, III, 10. Scales, 58. Gill-rakers (on lower limb), 11.

Body compressed; upper profile almost straight to nape, slightly concave where top of the head meets the elevated nape and back, lower profile almost equally, more evenly convex, with a blunt angle at the anal origin. Mouth moderately oblique, the lower jaw slightly projecting; maxillary concealed, except for its end, to under front margin of eye. A series of bluntly pointed teeth in jaws, with minute teeth (difficult to find) behind them. Mouth otherwise toothless. Preopercle with strong serrae, those at and below its angle blunt; opercle with two spines, the upper very small. Gill-rakers short and thick.

First dorsal spine small, the spines increasing in length to the fifth, fifth to seventh subequal, then decreasing somewhat to the last; first and second weak, the other strong. Anal spines strong, the second and third subequal, the first shorter. Caudal subtruncate, slightly emarginate with rounded corners. Ventral origin slightly behind pectoral axil, first ventral ray ending in a short filament which does not quite reach vent when the fin is depressed; end of pectoral rounded.

Body and opercle with moderately small ctenoid scales. Lateral line normal. Scales on cheek much smaller, increasing somewhat in size around to behind the eye. Top of head, snout, jaws, and apparently preopercle scaleless. Spinous dorsal and entire anal fin with basal sheathes of scales; base of caudal well scaled, and of soft dorsal scantily so. Suprascapular (post-clavicle) concealed by scales except the tips of two approximate flat spines on its hind margin. No noticeable ventral axillary scale.

General color (in alcohol) irregularly dusky, paler from throat to ventrals, with irregular pale markings. These form two broken pale stripes from upper and lower part of eye backward over opercle; a pale stripe from the corner of the mouth back across the cheek, separated from the eye by a dark stripe, and with a less defined one bordering it below. Pale blotches on sides which tend to fall into vertical series, small on the front of the back, large on the peduncle, where they cover as much space as the ground color. Vertical fins dusky, the soft dorsal darker at the base, anal paler at the margin; pectorals grayish, ventrals black.

A single specimen, the type, as above.

The striking resemblance of theraponid *T. percoides* and *Archamia jamesonoides* (especially the latter) to Australian marine serranoid *Gilbertia semicineta* and *jamesoni*, respectively, is remarkable. It is sufficiently close to suggest mimicry, but in the nature of the case mimicry seems unlikely. True relationship may be possible. *Gilbertia* is one of the more typical marine serranoids, and one thinks of less typical families and genera as derived from such. These two Australian fresh-water forms might have evolved in the new environment from invasion by the two mentioned forms of *Gilbertia*. It seems less likely, however, that so great generic, even family, differences, while retaining species resemblances, should have evolved in fresh water—less likely than in shore waters where fish competition is greater and evolution presumably more rapid. Is it possible that one's original concept is wrong—the modern serranid fishes derivative from, rather than ancestral to, related families, their resemblance one to the other a matter of habitus rather than of heritage?

Mogurnda mogurnda (Richardson)

Eleotris mogurnda RICHARDSON, 1848, The zoology of the voyage of H.M.S. Erebus and Terror. . . , Ichthyology, p. 4, pl. 2, figs. 1-2.

A single specimen of 97 mm. standard length from the Peach

River (branch of the Archer, Gulf drainage), elevation 800 feet, August 10.

Of the 11 species in the collection nine were taken from the Archer River; of the other two, one from its branch, the Peach River, one from the Coen River, also Gulf drainage. Only three were taken from the Pacific side of the divide, *Melanotaenia nigrans*, *Glossamia gillii*, and *Therapon unicolor* (two specimens from pools at Musgrave), all of wide distribution in eastern Australia. There are plenty of *Melanotaenia nigrans* from Brown's Creek (Pacific drainage), but besides that species only two specimens of *Glossamia gillii*, as contrasted with the nine species from the Archer River. This is presumably correlated with the less extensive Pacific slope drainage, its smaller rivers, and hence the relative paucity of its fish fauna.