

ON SOME INDO-PACIFIC GENERA OF LABROID  
FISHES, WITH THE DESCRIPTION OF A NEW  
GENUS AND SPECIES

BY

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(With two figures in the text)

In 1853 BLEEKER (1, p. 489 and 490) described two species, both from the bay of Batavia, as *Julis (Halichoeres) cyanopleura* and *Julis (Halichoeres) pyrrhogrammatoides*. He pointed out that these two species are closely related, the first to *Julis poecilopterus* SCHL., the second to *Julis pyrrhogramma* SCHL., both from Japan. Lastnamed species differ from the javanese species, besides by slightly different colourmarkings, by having 14 rays in the dorsal and the anal, against 11 rays in both fins of the javanese species. BLEEKER says that but for the difference in the number of dorsal and anal rays, which is considerable, at least for this genus, he would be tempted to consider the javanese species as climatic variations ("klimaatvarieteiten") of the japanese ones. He also draws attention to the great resemblance of these four species inter se, as they are all characterised by having 4 canines anteriorly in each jaw, and the outer pair in the upper jaw greatly curved backwards.

When at a later date (2, p. 100) he found that the pharyngealia inferiora of *H. cyanopleura* and *H. pyrrhogrammatoides* differ from those of the other members of the genus *Halichoeres* by being concave posteriorly, he created a new genus *Leptojulis* with *L. cyanopleura* as the type. It is curious that in the discussion of this new genus in the Atlas Ichthyologique (3, p. 128) BLEEKER says: "Je ne connais du genre *Leptojulis* que les deux espèces de mon cabinet, qui toutes les deux habitent la mer de Batavia", and that no mention is made of the two japanese species, which formerly he considered to be so very closely related to them. We can guess why he did so, for some years later (4, p. 251) he gave an elaborate description of *Julis poecilopterus* and *pyrrhogramma*. The inferior pharyngeals are described as being not concave behind and agreeing in all respects with those of other species of *Halichoeres*, in which genus he now places the two species. Again, no mention is made of his species of *Leptojulis*, but the japanese species are now compared with *Halichoeres bicolor* and *hyrtli*, which have the same disposition of bands on the body, but differ in the number of canines and in the number of dorsal and anal rays.

In one of BLEEKER's last papers (5, p. 5), a checklist of the fishes from

Japan, the two species are recorded as *PlatyGLOSSUS (Parajulis) poecilopterus* and *PlatyGLOSSUS (Parajulis) pyrrhogramma*. In later years BLEEKER followed GÜNTHER in using the name *PlatyGLOSSUS* instead of *Halichoeres*. It is therefore clear, that BLEEKER now considered the Japanese species as belonging to a distinct subgenus of the large genus *Halichoeres*. BLEEKER did not give a description of this subgenus and as far as I can see, this is the first and the last time that the name *Parajulis* was used. I cannot understand what induced JORDAN (9, p. 335) to quote BLEEKER's paper cited above (4, p. 250) as containing the description of a genus *Parajulis*. As said above in this paper the species are referred to the genus *Halichoeres* and only 14 years later the name *Parajulis* appears, not as a genus, but as a subgenus.

So at the end of his life BLEEKER puts the two groups of species, which formerly he thought so nearly related as to be almost varieties, in two different genera.

I think that BLEEKER's original opinion was better than his last. Although, as we will see presently, the dentition of the pharyngealia can be of use to distinguish genera among the *Labroidea*, the difference in form of the hind border of the bone is too slight to be of any weight in separating genera.

The two species of *LeptoJULIS* described by BLEEKER have not been found again, at least they have not been mentioned in literature, with the exception of a paper by HERRE (8, p. 75), who refers a specimen of 69 mm. long from Dumaguete, Philippines, to *L. cyanopleura*, without any further remarks. The two Japanese species, at the other hand, have been studied repeatedly by several authors and are invariably placed in the genus *Halichoeres* or its synonym *PlatyGLOSSUS*. JORDAN and SNYDER (10, p. 637) made the discovery that these two species are merely the two sexes of one and the same species, which has to be called *H. poecilopterus*. As the differences in colour between the male (*poecilopterus*) and the female (*pyrrhogramma*) are exactly matched by those between *cyanopleura* and *pyrrhogrammatoides*, I have no doubt that they too represent the male and female of one species, which has to be called *cyanopleura*.

This remarkable sexual dimorphism brings the two species still nearer together and the only question to be answered remains: Can we retain the genus *LeptoJULIS* for these species or ought they to find a place in the large genus *Halichoeres*. The only character in which they differ from typical *Halichoeres* is the number of the canines in the jaws. Generally the species of *Halichoeres* have two canines anteriorly in each jaw, but in species as *H. miniatus*, *margaritaceus*, and *nebulosus* we find 4 canines in the upper jaw, and the outer pair curved backwards, exactly as in *LeptoJULIS*. This reduces the difference to two canines more in the lower jaw only and as there has never been any objection to include in the genus *Halichoeres* species with two and with four canines in the upper jaw, I don't see that two canines more in the lower jaw would make any difference.

My opinion is therefore that the genus *Leptojulius* has to be cancelled, or at its best has to be degraded to the rank of a subgenus, as BLEEKER has done with several of the genera he formerly thought to be different from *Halichoeres*.

One more species of *Leptojulius* has been described, viz. *L. pardalis* KNER (11, p. 727). The same species has been described by GÜNTHER as *PlatyGLOSSUS nigromaculatus* and by SEALE (12, p. 89) as *Halichoeres nigropunctatus*. By its shape, being very compressed, by its dentition, which is that described for

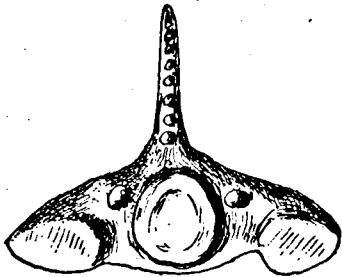


Fig. 1. Lower pharyngeals of  
*PlatyGLOSSUS nigromaculatus*  
GTHR. x 10.

*Leptojulius*, by its spotted coloration and by the presence of a black ocellus on the isthmus it greatly suggests *Macropharyngodon meleagris* (c.v.). Curiously enough, it has never been compared with that species. *Macropharyngodon* is another of BLEEKER's genera, which generally has been considered as a subgenus of *Halichoeres*, wrongly I think, for in *M. meleagris* the dentition of the lower pharyngeals is utterly different from that of *Halichoeres* or of one of the related genera. BLEEKER describes the dentition of the pharyngealia inferiora of *Macropharyngodon* as consisting of

three teeth only, one giant in the middle and two minute ones at both sides. Compare this with the several rows of moderate teeth in *Halichoeres*, and one must admit that the difference is striking.

The pharyngeal dentition of *L. pardalis* has never been studied and I was therefore anxious to know how it looks. Through the kindness of Mr. NORMAN I had the opportunity to study a specimen of *PlatyGLOSSUS nigromaculatus* in the collection of the British Museum. An inspection of the lower pharyngeals revealed what I had hoped: As is clearly seen on Fig. 1, the dentition is exactly the same as in *M. meleagris*. *Leptojulius pardalis* therefore is without question a member of the genus *Macropharyngodon*.

The genus *Halichoeres* has been treated very differently by the older ichthyologists. BLEEKER restricted it to those species, which lack a scaly sheath on the dorsal and anal fins, and which have no scales behind the eyes. GÜNTHER (6 p. 143) lumped BLEEKER's genera *PlatyGLOSSUS*, *Güntheria*, *Hemitautoga*, *Halichoeres* and *Macropharyngodon* into one genus, which he called *PlatyGLOSSUS*. *Leptojulius* is kept apart by GÜNTHER. Most authors have followed him, but rightly use the name *Halichoeres* instead of *PlatyGLOSSUS* as this last name, introduced by KLEIN, is not binomical in the Linnean sense and therefore is not valid.

From the foregoing it is clear, that according to me *Macropharyngodon* has to be scratched from the synonymy and that *Leptojulius* has to be added to it.

Among a collection, kindly sent to me for identification by the Bureau of

Science, Manila, I found a fish, collected in the harbour of Amoy, China, which agrees in all respects with the characteristics of *Halichoeres*, but for the nature of the dorsal and anal spines, which are no spines at all, for they are flexible and not-pungent, in fact differing from the soft rays only in that they are not divided. A species of *Halichoeres* with flexible spines is f.i. *H. tenuispinis* GTHR (6 p. 161), but here the spines are pungent and therefore from another structure than in my specimen. In the genus *Coris*, which is related to *Halichoeres*, the anterior dorsal spines may be flexible and not pungent, but I know of no instance where all the spines are of that character. Besides the scales are much smaller in *Coris* than in my specimen, which has the same kind of squamation as *Halichoeres*. Perhaps its nearest relative is *Oxyjulis californicus* GIRARD, from the Pacific coast of America, but in the genus *Oxyjulis* there is no posterior canine and the tubes of the lateral line are not or scarcely ramified.

I see no other outway than to create a new genus for the fish from Amoy, and as this paper is published in a volume, issued on the occasion of the centenary of the Royal Zoological Society "Natura Artis Magistra" known by everyone in Holland as "Artis", I propose to call it:

*Artisia n.g.*

Body covered with large scales, those of occiput, of thorax and of anterior part of belly much smaller. Head naked. Preopercle smooth. Lateral line with arborescent tubes, continuous, with a sharp bent downwards below posterior dorsal rays. Dorsal and anal without scaly sheath. A few rows of small scales on base of caudal. A row of rather crowded, pointed teeth in the jaws, with an inner row of smaller, more conical ones. The teeth of the outer row increase in size anteriorly, the foremost in the lower jaw moderate canines. The anterior pair in the upper jaw strong canines, the next pair smaller, hooked, the points of the teeth directed backwards. A posterior canine in the upper jaw present. Teeth on body of lower pharyngeals conical, in three irregular rows, the teeth of the posterior row larger than the others and the median tooth of this row still larger. Dorsal consisting of nine weak, flexible, not-pungent spines and 12 divided rays. Anal with three moderate, flexible, not-pungent spines and 12 divided rays. Pectorals truncate. Ventrals pointed. Caudal rounded. Gillmembranes attached to isthmus.

*Artisia festiva n.sp.* (Fig. 2).

D. 9.12. A. 3.12. P. 2 11. V. 1.5. Ll. 27. Ltr.  $\frac{1\frac{1}{2}}{9}$

Height 4.2, 4.8 in length with caudal. Head 3.5, 4 in length with caudal. Eye about 6, twice in snout and 1.5 in convex interorbital space. Mouth somewhat oblique. Corner of mouth below posterior nostril. Anterior nostril with a short

tube. Scales beginning on occiput with about six distant rows of very small scales, which are imbedded in the skin. Dorsal spines subequal, shorter than snout. Soft rays somewhat longer. The membrane between the spines not incised. First anal spine small, third longest, about as long as longest dorsal spine. Soft anal slightly deeper than soft dorsal. Pectorals equal to head without snout; ventrals as long as snout and eye together. Caudal rounded.

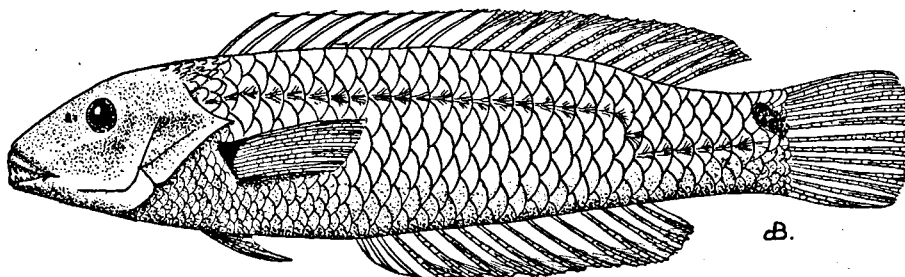


Fig. 2. *Artisia festiva* n. sp. Nat. size.

Colour in spirits uniform reddish-brown, the fins pinkish. A triangular black spot at base of pectoral and a large oblong one on base of caudal, immediately above the lateral line.

One specimen, 120 mm long, Amoy harbour. China. R. W. Broadley leg. 1925. Bureau of Science, Manila, N<sup>o</sup> 17752.

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