

The scyllarid lobsters (Crustacea: Decapoda: Palinuridea) collected by F. Péron and C.A. Lesueur during the 1800-1804 expedition to Australia

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Key words: Scyllaridae; *Ibacus peronii*; *Scyllarides squammosus*; Péron and Lesueur; Australia; Mauritius. The original figures of Scyllaridae by Lesueur and manuscript descriptions and notes by Péron, made during the 1800-1804 French Expedition to Australia, are now kept in the Muséum d'Histoire Naturelle du Havre, and shed new light on the identity, type locality and whereabouts of these species. The figures and part of the descriptive material are reproduced here.

During the famous 1800-1804 "Expédition aux Terres Australes" under the leadership of captain Nicholas Baudin, the naturalist of the expedition, François Péron, helped by the artist Charles-Alexandre Lesueur, brought together important zoological collections. Unfortunately, the Crustacea of this collection have not been dealt with as a whole until 1990, when Bonnemains & Jones (1990: 27-66) published a compilation of the published and manuscript data of the Crustacea of this collection. Very extensive manuscript notes, catalogues and illustrations by Péron and Lesueur are preserved in the Muséum d'Histoire Naturelle du Havre, France. On p. 44 Bonnemains & Jones listed two scyllarid lobsters, both of which are illustrated: "*Ibacus cf. peronii*" (fig. 28), and "*Scyllarides cf. squammosus*" (fig. 29). A study of the documents in the Havre Natural History Museum, which Madame Jacqueline Bonnemains, curator of the Lesueur collection in that museum, kindly placed at my disposal, revealed some interesting data about the two species, which thus far were not generally known. Both species were correctly identified in the 1990 paper, and the indication "cf." in both can now be omitted.

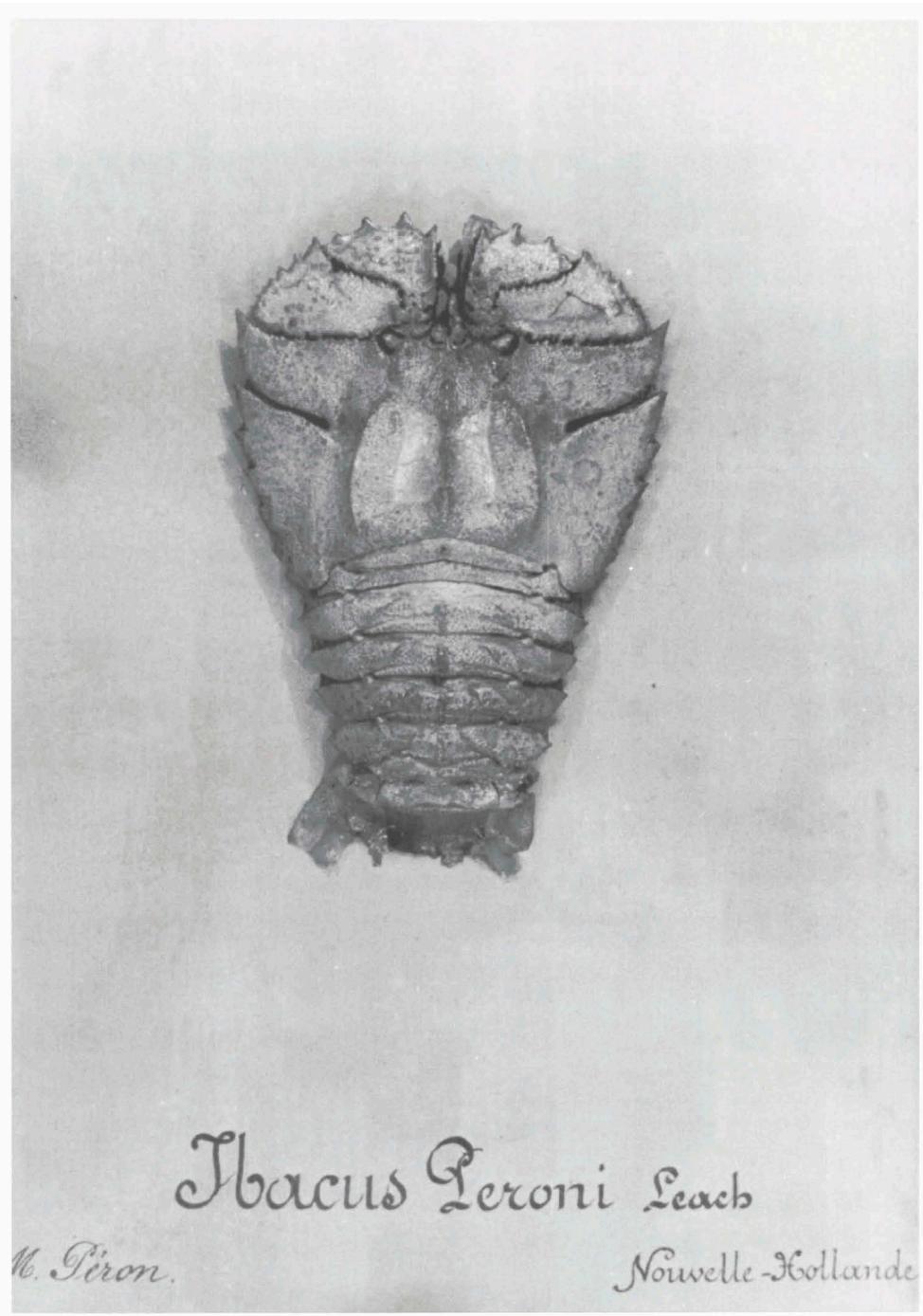
Ibacus peronii Leach, 1815 (figs 1, 2)

Ibacus peronii Leach, 1815: 152, pl. 119.

Ibacus incisus (Péron MS) Leach, 1815: 152 (in synonymy of *I. peronii*).

Scyllarus kingiensis (Péron MS) Bonnemains & Jones, 1990: 44.

When Leach (1815: 152, pl. 119) first described the present species, he gave it the name *Ibacus peronii*, and remarked: "The only specimen of this species that I have seen, is preserved in the collection of the Jardin des Plantes, where it was deposited by Peron, who brought it from New Holland". According to Leach's synonymy, Péron gave the species the (manuscript) name *Scyllarus incisus*, a name that incorrectly has been adopted by some later authors, but at present is not used any longer. Leach's holotype is still extant, it is preserved dry in the collection of the Muséum National



Ibacus peronii Leach

M. Péron.

Nouvelle-Hollande

Fig. 1. *Ibacus peronii* Leach, 1815, holotype specimen in Muséum National d'Histoire Naturelle, Paris, no.Pa. 146. Photograph courtesy of Prof. J. Forest.

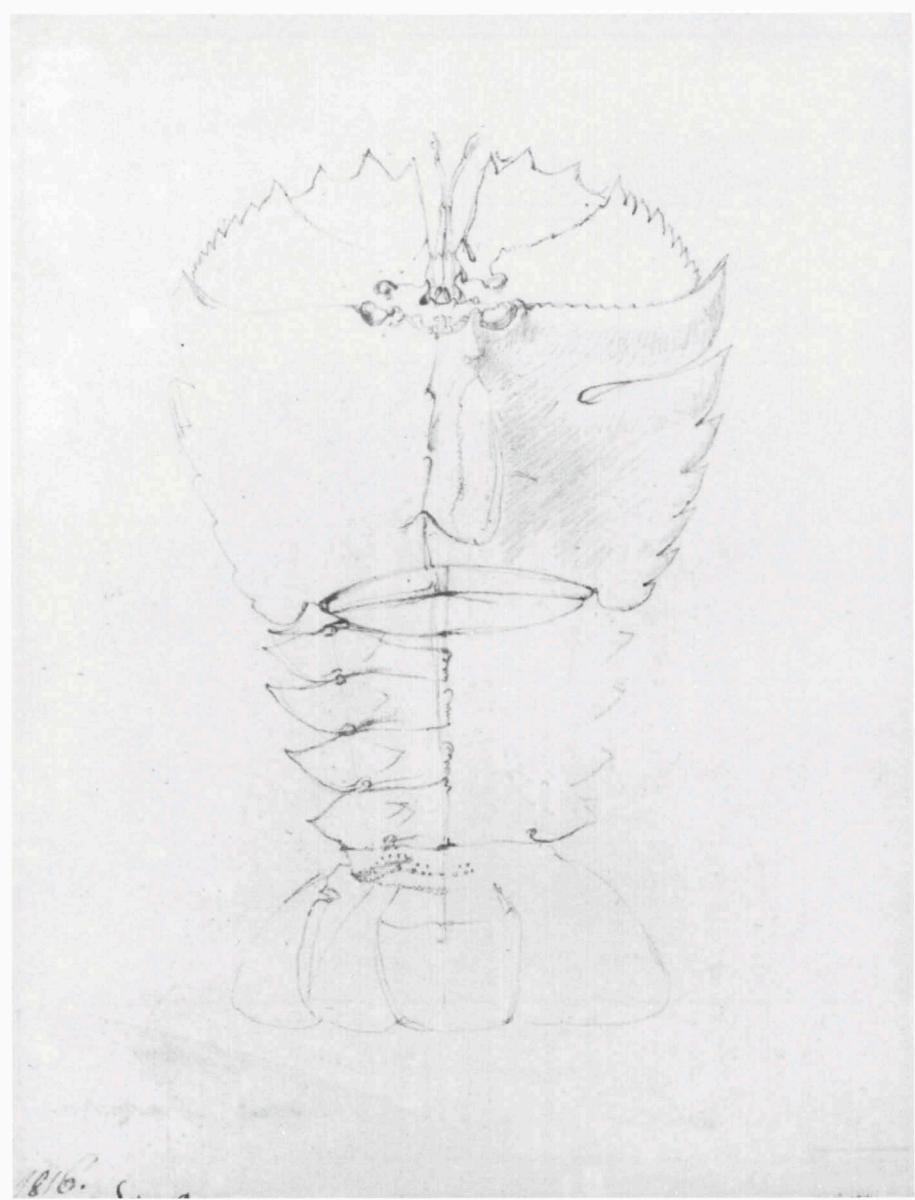


Fig. 2. *Ibacus peronii* Leach, 1815, drawing of the holotype specimen by C.A. Lesueur in Muséum d'Histoire Naturelle du Havre. Photograph R. Malherbe, from a negative received by courtesy of Mme J. Bonnemains.

d'Histoire Naturelle in Paris under the registered number Pa 146; a photograph of it was published by Holthuis (1985: 65, fig. 19) and is also reproduced here (fig. 1) for comparison with Lesueur's drawing of the same specimen (fig. 2). Through the kindness of Prof. Jacques Forest of the Paris Museum, I have been allowed to examine the Paris specimen, and found that there cannot be any doubt about its type status.

In the Lesueur archives of the Muséum d'Histoire Naturelle du Havre there is a drawing of the species partly in pencil and partly in pen and ink. The figure (fig. 2) is not finished but definitely shows *Ibacus peronii*, and must be the type specimen of that species. The drawing is signed by Lesueur and shows the inscriptions "1816" and "Cancer no. 37". These numbers correspond to those used in a manuscript list held by the Havre Museum, indicated as "carnet 21002" (35 × 22 cm) and entitled "Descriptions zoologiques - Tableau général de tous les objets décrits dans les 10 numéros de mon journal zoographique remis au Commandant Baudin en exécution des ordres du ministre de la Marine et des Colonies", which was signed "Péron zoologiste à bord de la Corvette le Géographe". This list is arranged in six columns: no. 1 "Numéros des Dessins.", 2 "Noms des Objets dessinés.", 3 "Leur classe.", 4 "numéros des Descriptions", 5 "Habitation.", and 6 "Observations.". The line starting in column 1 with "1816" continues in column 2 with "*Scyllarus Kingiensis*.", in col. 3 with "Crustacés.", in col. 4 with "37.", and in col. 5 with "île King.", col. 6 is blank.

These data show the exact type locality of the species. Leach (1815) gave the type locality as "in Australasiae mari" and "New Holland". From the above documents we know now that the type was collected at King Island at about 39°50'S 144°00'E, in the Bass Strait between Tasmania and the Australian mainland, where the Baudin expedition explored between 7 and 28 December 1802.

When sending the material to the Paris Museum, Péron evidently changed the original manuscript name *kingiensis* to that of *incisus*, as the latter was the name found by Leach with the specimen.

The specific name *incisus* of *Scyllarus incisus*, used by Leach, 1815 in the synonymy of *Ibacus peronii* is an available name, as it was published before 1961 and treated as an available name and adopted by several later zoologists, e.g., by Lamarck, 1818: 213 (see Art. 11e of the International Code of Zoological Nomenclature; ICZN, 1985: 24, 25). The specific name *kingiensis* of *Scyllarus kingiensis*, however, is not an available name. It was first published by Bonnemains & Jones (1990: 44) under no. 76137 (error for 73137, as Madame Bonnemains pointed out to me), *Ibacus cf. peronii*. If the name were considered to be published there as a synonym of *I. peronii*, it would be unavailable under Art. 11(e)(ii) of the Code, being published after 1961. However, if *S. kingiensis* was considered not a synonym of *I. peronii*, as it was published under *I. cf. peronii*, it would have to be considered a name published with a figure, but without a description. Such a name is unavailable under Art. 13(a)(i) of the Code, being published after 1930 and not accompanied by a description in words, or by a bibliographic reference to such a description, and not a new replacement name. The nomenclaturally correct name *Ibacus peronii* Leach, 1815, in modern literature is widely used for the species, and offers no nomenclatural problems.

Scyllarides squamosus (H. Milne Edwards, 1837)
(figs 3-5)

Scyllarus squamosus H. Milne Edwards, 1837: 284.

Scyllarus villosus (Péron MS) Bonnemains & Jones, 1990: 44, fig. 29.

The second scyllarid species mentioned in the documents by Péron and Lesueur is a specimen of *Scyllarides squamosus*, which was collected at Ile de France (= Mau-

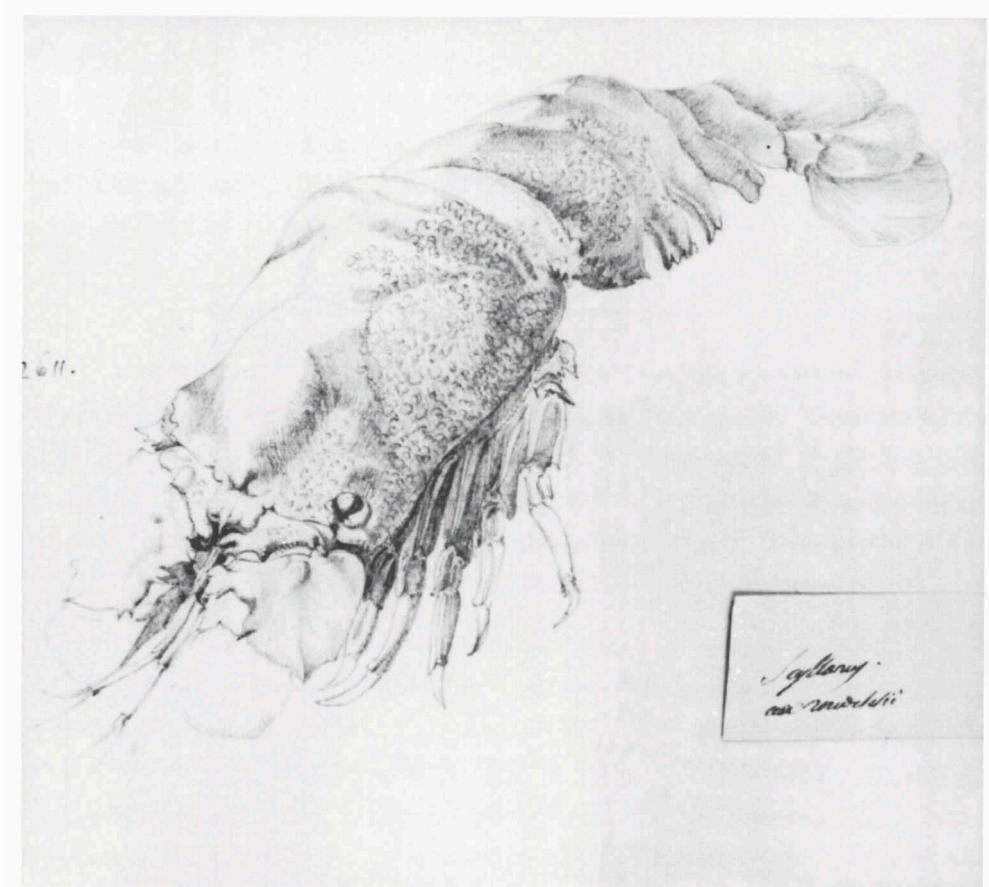


Fig. 3. *Scyllarides squamosus* (H.Milne Edwards, 1837), original drawing of *Scyllarus villosus* (Péron MS) in Muséum d'Histoire Naturelle du Havre. Photograph R. Malherbe, from a negative received by courtesy of Mme J. Bonnemains.

ritius). An excellent, but unfinished drawing in pen and ink by Lesueur is in the collection of the Le Havre Museum, it is reproduced by Bonnemains & Jones (1990: 44, fig. 29) and also published in the present paper (fig. 3). In the legend of the figure the numbers 2611 and 76 are given as well as the name *Scyllarus*. The number 2611 refers to a Latin description given in a manuscript by Péron entitled "Diarium Zoographicum, No. XIII^o, insula Franciae, è 28â. die Thermidoris an^o XI^o. ad usque 24am Frimarii a^o. XIIe. [= 28 Thermidor an XI à 24 Frimaire an XII, = 16 August 1803 to 16 December 1803]", and signed "Péron Zoogiste"; this document is likewise in the possession of the Museum of Le Havre. Under the number given to the figure ("Del. 2611.") the document provides a Latin description of *Scyllarus villosus* that is reproduced below: as the description is handwritten and in some places not very clear, it is quite possible that I made a few false interpretations notwithstanding the great help that I received in my efforts from Dr C. Smeenk of the Leiden Museum.

"*Scyllarus Villosum*

Antennae quatuor quorum anteriori-superiores squammatae latissime tri-articulatae; articulus primus angustissimus interno margine obtusatim-diaculeatus; inter-medius articulus latissimus omnium sub-triangularis, internâ margine suâ validioribus aculeis duobus instructus, reliquis suis partibus crenulatim-denticulatus. Ultimus sub-rotundatus, ad basim suam appendiculo munitus articulato diacanthifero, ipse muticus, margine que suâ crenulatim denticulatus, planiusculus. Antennae inferiori-interna longiores cilindroico-filiformes articulationibus quatuor ad apicem suum bifidae violaceae, muticae. Oculi laterali-anteriores in fossulâ thoracis ipsius reconditi cuius fossulae circumferentia tuberculis aspera prominula. Oculi varium ipsi brevissimi obtusatissimi suam ad basim incrassatissimi vinaceo-fuscosi; suum ad apicem obtusati nitidiores tenuissimique reticulati, nigri. Thorax latissimus longior et solidissimus, anteriori truncatus, sed fronte quâdam instructus inter tentacula squammosa basim et ad ipsorum posita obtusatâ. Anguli anteriori-laterales ejus crassiori-crenulatim asperati; latera obtusiori-crenata. Thorax et ipse revolutus abdominali faciei ad eo ut corpus animalis ipsius paritus obtusatur ista thoracis dispositio. Thoracis testa posterius est truncata integra non crenulata. Cauda validissima longissima latissima sex articulationibus distincta, articulus unus quisque angulo utroque suo inferuo crenulatim dentato. Ad apicem caudae foliola quinque latissima mollissima travisericea mutica margine suâ fimbriatulata. Maxillarum tres pares palpigerum in dorso suum et ad apicem aculeo validissimo uncinato definitarum. Mandibulae validissime incrassatae latiores et palpigerae. Chelae nullae, pedum autem quinque pares, generali conformatioне suâ sibi iuriam simillimi. Articulus primus omnium tuberculatim-asperulatus, tertius et omnium lamello-sè-carinatissimus in dorso, aculeoque validissimo munitus in primo pede; 4tus omnium articulus breviore incrassatus et in dorso suo profundiori-sulcatus. Omnium haudum unguiculus longior validissimus uncinatus ad apicem suum fuscous posteriorum equidem vestigia omnibus corticulis observanda caudae, sed ipsa longiora bifoliata longiora in articulo 2do vix in aliis omnibus ipsorum vestigia quaedam observanda. Color generalis ejus sordidiori fuscescente-vinaceus; articulus 1us caudae intensissimo rubro maculatus, macula grandior ejus; facies inferna cuncta istius animalis sordidissimè lutescens, maculis minoribus tanquam aspersa contortissimis et auroreis potissimum in foliolis caudae distinguendis. Superficies autem animalis istius cuncta tuberculis verruculosa pilulisque densissimè vesita brevissimis tenuissimis, unde nomen excerpti meum villosum. 26,0 centimetros longus quorum ipse thorax sibi retinet 14,0; caudaque tantum 10,0; antennae squammatae 5,5 longae, 3,9 latum; thorax 7,0 latus; cauda 6,5; folium caudae medium 3,1 longum, 4,0 latum; crassis trunci maxima 5,6. Pedes anteriores 8,7 longi; Pedes 2di 9,0 longi; 3tii 7,8; 4i 6,5; 5i 6,5".

As Péron placed all the material collected by him in the Paris Museum, this must also have been the case with the present specimen. When Henri Milne Edwards (1834-1840) wrote his three-volume "Histoire Naturelle des Crustacés" he based this on the collections of the Paris Museum. It was in volume II (1837), on pp. 284-285 that he published the original description of his *Scyllarus squamosus*, based on a specimen from "l'Ile-de-France". As no other scyllarid was mentioned by him from



Fig. 4. *Scyllarides squammosus* (H.Milne Edwards, 1837). Enlargement of the front part of fig.3, showing the unfinished sketch of the right antenna. Photograph R. Malherbe, from a negative received by courtesy of Mme J. Bonnemains.

that locality, it seems most likely that the specimen that he used for his description was Péron's specimen of "*Scyllarus villosus*", which thus must be considered the type of Milne Edwards' species. It also might well be the old dry specimen of *Scyllarides squammosus* from "Ile de France" preserved at present in the Paris Museum collection under no. Pa 408 and shown here as fig. 5.

However, there is a difficulty here. H. Milne Edwards described the type specimen of *Scyllarus squammosus* with "Longueur, environ 15 pouces", which is about 400 mm. Prof. Jacques Forest of the Paris Museum informed me that the specimen Pa 408 has a total length of 215 mm, slightly more than half as long as the supposed length of the type. In the literature the greatest total length given for the species is 300 mm. In the more than 80 specimens that I examined the greatest carapace length was 100 mm, which also gives a maximum total length of about 300 mm. It seems very likely

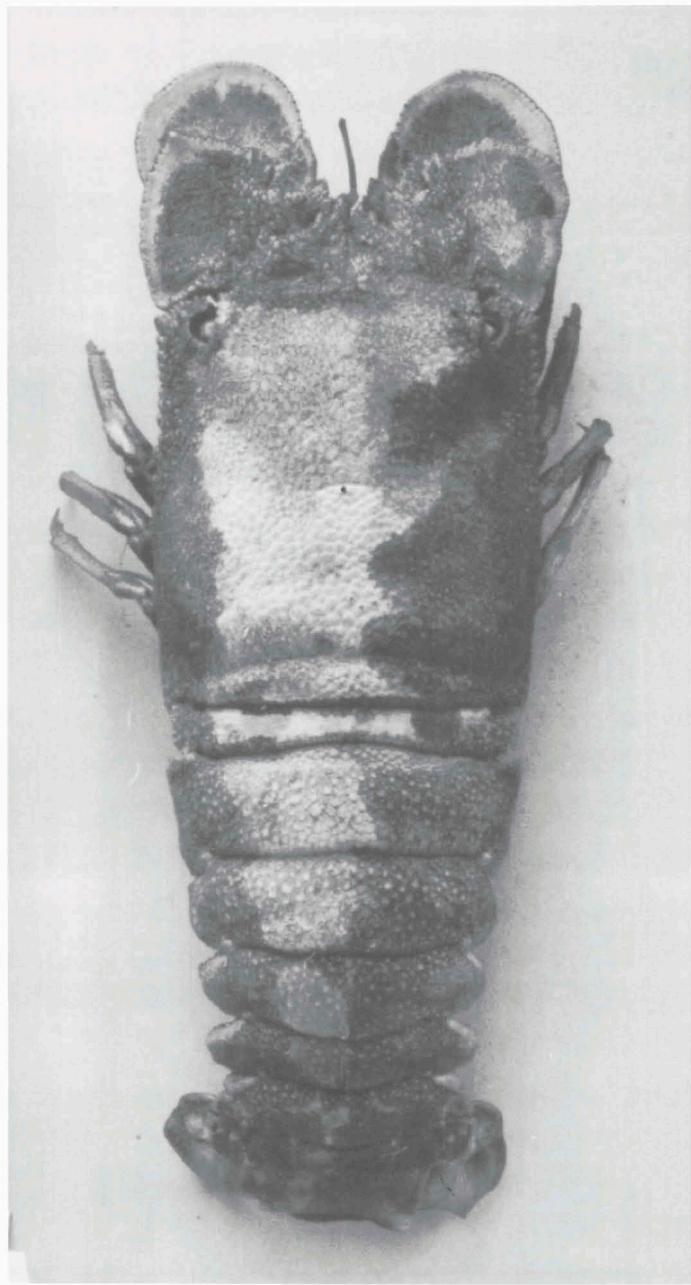


Fig. 5. *Scyllarides squammosus* (H.Milne Edwards, 1837). Dry specimen from Mauritius in collection Muséum National d'Histoire Naturelle, Paris, no. Pa. 408; possibly type of the species. Photograph courtesy Prof. J. Forest.

therefore that H. Milne Edwards' measurement is incorrect, and that the type specimen was much less than 400 mm. Péron gave the total length of *Scyllarus villosus* as 260 mm; he almost certainly included the antennae in this measurement. At present the total length of Scyllarid specimens is measured from the tip of the rostrum to the end of the telson. The total length of Péron's specimen (modern style) then would be about 205 mm, namely 260 mm minus 55 mm (the length of the antennae according to Péron). This would check quite well with the Paris specimen, which has, as said, a total length of 215 mm.

A second difficulty is the following. The specimen in the Paris Museum is abnormal in so far that the fourth segment of the right antenna (i.e., the lower of the two large and wide segments) does not show an anterolateral triangular point, but is rounded there. In this respect the left antenna of that specimen is normal. Unfortunately in the figure of *S. villosus*, as published by Bonnemains & Jones (1990: 44, fig. 29) and shown in the present paper as fig. 3, the right antenna is very vague and the outlines of the segments are hardly visible. Madame Bonnemains was so kind as to send me the negative of the photograph of this figure. Some computerized enlargements made of the anterior part of the body in this sketch showed that the drawing of the right antenna had not been finished and is in a very rough and incomplete state (fig. 4), only the bare outlines are indicated and also the proportions are incorrect, the antenna, and especially the fourth segment and the rest of the basal part being shown far too long. The anterior margin of the fourth segment in this figure shows a rather distinct angular anterolateral angle similar to that of the left antenna. If this were a true representation of the shape of that antenna, Lesueur's specimen could not have been the same as the one now in Paris; this anterolateral tip cannot have been broken in the Paris specimen, as its margin there shows the normal crenulations throughout. It is possible, however, that Lesueur modelled his rough outline of the right antenna on that of the left, and never finished the final drawing; also it is possible that the sketch of the right antenna may have been left unfinished because of this abnormality. Unfortunately thus, the drawing does not help to solve the question whether or not the specimen in the Paris Museum is both the type of *S. squamosus* (which is very likely) and the specimen on which Péron based his *Scyllarus villosus* (which now seems less likely, although not impossible).

Like the name *Scyllarus kingiensis*, the name *Scyllarus villosus* first published by Bonnemains & Jones (1990) is an unavailable name, and for the same reasons. *Scyllarides squamosus* (H. Milne Edwards, 1837) is the correct name of the species and has been employed regularly as such in the modern literature, be it that the grammatically more correct spelling *squamosus* (with one "m") has often been used instead of the nomenclaturally correct *squamosus* (with double "m" as in the original publication).

A photograph of the type specimen Pa. 408 in the Paris Museum is reproduced here as fig. 5 for comparison with Lesueur's figure (figs 3 and 4).

Péron's specimen was collected at Mauritius between 16 August and 16 December 1803, during the home voyage of the ship "Géographe".

Acknowledgements

I have to thank in the first place Madame Jacqueline Bonnemains of the Muséum d'Histoire Naturelle du Havre, for bringing the figures and manuscript notes dis-

cussed here to my attention, and for her excellent help and advice, always promptly given. To Mr R. Malherbe, photographer of the Leiden Museum for the printing of figs 2 and 3 and for the great pains that he took to make a clear reproduction of the anterior part of *Scyllarus villosus* (fig. 4). To Prof. Jacques Forest of the Muséum National d'Histoire Naturelle of Paris, I am most grateful for all the information about specimens Pa. 146 and Pa. 408 that he gave, and for providing me with their photographs both published here. Dr C. Smeenk of the National Museum of Natural History in Leiden gave much of his time in helping me to decipher Péron's latin description of *Scyllarus villosus*, for which I am most grateful.

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