

## The asteroid species of Lamarck (Echinodermata: Asteroidea)

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# The asteroid species of Lamarck (Echinodermata: Asteroidea)

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## ABSTRACT

Zoologist Péron and artist Lesueur, both members of the scientific staff of the Baudin expedition to the Southern Lands (September 1800-March 1804), collected during their voyage 36 different species of asteroids. This is what wrote Lamarck in a report made in June 1804. This number was clearly reduced by Lamarck himself who, in his 1816 publication, listed only 15 species from the South Seas in the Paris Museum collection. However, the different asteroids collected during the expedition were drawn by Lesueur (water colours and pencil drawings) who thus realised a real pictorial register. Lesueur's drawings are housed in the Le Havre Museum. Due to their realism and precision, the drawings make it easy to identify the species. Confrontation of Lamarck's report (1804) and publication (1816) with Lesueur's drawings (done between 1802 and 1804) gives a new, more precise idea of the importance of the collection of South Seas asteroids brought back to France and allows to reliably count the number of new species that it contained. Also, this makes it possible to complete the often too brief descriptions of some Lamarckian species and to clarify their status. Eleven taxonomic changes are thus proposed here: *Asterias calcar* var. *quinqueangula* is synonymized with *Parvulastra exigua* (Lamarck, 1816), *Asterias calcitraba* var. 1 with *Bollonaster pectinatus* (Sladen, 1883), *Asterias calcitraba* var. 2 with *Astropecten vappa* Müller & Troschel, 1843, *Asterias nodosa* var. 3 with *Protoreaster lincki* (Blainville, 1830), *Asterias pentagonula* with *Tosia australis* Gray, 1840, *Asterias pleyadella* with *Protoreaster* sp., *Asterias punctata* with *Asteropsis carinifera* (Lamarck, 1816), *Asterias rosacea* var. *lobis senis* with *Anseropoda* sp., *Asteriscus setaceus* with *Paranepanthia grandis* (H. L. Clark, 1928), *Astrogonium lamarckii* Müller & Troschel, 1842 with *Goniaster tessellatus* (Lamarck, 1816) and *Asterias cuspidata* is moved to the genus *Mediaster* Stimpson, 1857 as *Mediaster cuspidatus* (Lamarck, 1816) n. comb.

## KEY WORDS

Lesueur,  
Asteroidea,  
Echinodermata,  
sea stars,  
Australia,  
Tasmania,  
Baudin expedition,  
new synonymies,  
new combination.

## RÉSUMÉ

*Les espèces d'astéries de Lamarck (Echinodermata: Asteroidea).*

Le zoologiste Péron et le dessinateur Lesueur, membres de l'équipe scientifique de l'expédition Baudin aux Terres australes (septembre 1800-mars 1804), y ont récolté, selon un rapport de Lamarck daté de juin 1804, 36 espèces différentes d'astéries. Ce nombre fut nettement réduit, en 1816, par Lamarck lui-même qui ne répertoria que 15 espèces d'origine australe dans les collections du muséum de Paris. Or, les différentes astéries récoltées pendant l'expédition furent dessinées par Lesueur (aquarelles et crayonnés) qui en réalisa un véritable registre pictural. Conservés au muséum du Havre, les dessins de Lesueur, par leur réalisme et leur précision, permettent aisément d'identifier les espèces. La confrontation du rapport de Lamarck (1804) et de sa publication (1816) avec les dessins de Lesueur (réalisés entre 1802 et 1804) donne une image précise et nouvelle de l'importance de la collection d'astéries ramenée à l'époque en France et permet de déterminer

**MOTS CLÉS**

Lesueur,  
Asteroidea,  
Echinodermata,  
étoiles de mer,  
Australie,  
Tasmanie,  
expédition Baudin,  
synonymies nouvelles,  
combinaison nouvelle.

fiablement le nombre de nouvelles espèces australes recueillies alors. Une confrontation qui a également permis de compléter les descriptions, souvent très brèves, de certaines des espèces d'astéries établies par Lamarck et d'éclaircir leur statut. Onze changements taxonomiques sont ainsi proposés ici : *Asterias calcar* var. *quinqueangula* est synonyme de *Parvulastra exigua* (Lamarck, 1816), *Asterias calcitraba* var. 1 de *Bollonaster pectinatus* (Sladen, 1883), *Asterias calcitraba* var. 2 de *Astropecten vappa* Müller & Troschel, 1843, *Asterias nodosa* var. 3 de *Protoreaster lincki* (Blainville, 1830), *Asterias pentagonula* de *Tosia australis* Gray, 1840, *Asterias pleyadella* de *Protoreaster* sp., *Asterias punctata* de *Asteropsis carinifera* (Lamarck, 1816), *Asterias roseacea* var. *lobis senis* de *Anseropoda* sp., *Asteriscus setaceus* de *Paranepanthia grandis* (H. L. Clark, 1928), *Astrogonium lamarckii* Müller & Troschel, 1842 de *Goniaster tessellatus* (Lamarck, 1816) et *Asterias cuspidata* est transférée dans le genre *Mediaster* Stimpson, 1857 en tant que *Mediaster cuspidatus* (Lamarck, 1816) n. comb.

**INTRODUCTION**

The part devoted to asteroids in the second volume of Lamarck's *Histoire naturelle des Animaux sans Vertèbres* (1816) reports on 44 species and 23 varieties. Some of the new species Lamarck then described originated from European seas and the Atlantic and Indian coasts of Africa though most came from Australian coasts. Indeed, the Paris Museum had received the very large collection of sea stars made during the *Voyage de Découvertes aux Terres australes*, the so-called Baudin expedition, in the early nineteenth century (1800-1804). The main collectors of this collection were the zoologist François Péron and his friend the artist Charles-Alexandre Lesueur, both members of the expedition scientific staff sailing on the vessel *Le Géographe*.

The collections of the Baudin expedition reached the Muséum national d'Histoire naturelle (MNHN) at the end of April 1804. Two months later Lamarck presented several reports on invertebrates to his colleagues at the Muséum; one of which dealing with echinoderms (Jangoux in press). The collection of asteroid contains 264 individuals representing, Lamarck wrote, 36 different species of *Asterias*, many of which were, he said, new. What he did not know at the time was that the asteroids collected were drawn (watercolours and pencil drawings) by Lesueur, the expedition artist. Fortunately, Lesueur's drawings have been preserved and kept in good condition, being housed since the last quarter of the 19th century in the Muséum d'Histoire naturelle du Havre (MHNH) (the complicated story of these drawings and their progressive acquisition by the MHNH is detailed in Bonnemains [1995]). There are 53 groups of asteroids drawings in the Lesueur's collection. They are very realistic and most of them allow identification of species. Moreover, they are so precise that some show the arrangement of skeletal plates and details on their spine armament. Based on these drawings, the number of species collected was assessed at about 50 (Jangoux 1984), more than the 36 species reported by Lamarck in 1804, and still much more than the 15 species collected by Péron and Lesueur that Lamarck (1816) said he found in the MNHN.

The number of species collected during Baudin's voyage differs distinctly according to the sources (50, 36 or 15) without knowing the exact number of new species collected by Péron and Lesueur, except that it should be more than 15! Lesueur's drawings of asteroids only concern the individuals of the Baudin expedition. He thus made a pictorial register representing

almost all the asteroids that reached the Muséum in April 1804. Thus, two groups of new species from the South Seas should be considered: those described by Lamarck in 1816, and those not reported by Lamarck in 1816, although the specimens have been seen, counted and sorted by him when the collected material reached the Muséum in 1804.

The Baudin expedition is well documented and, while Lamarck rarely cites the collecting localities (in most cases he writes "originated from the South Seas" or even more allusively "from the voyage of Péron and Lesueur") they can be found in various archives. Collections were made in West Australia (Geographe Bay, Swan River, Barren Islands [Bernier and Dorre Islands], Shark Bay, Depuch Island, King George Sound [Albany]), Tasmania (d'Entrecasteaux Channel, Maria Island, King Island), New South Wales (Port Jackson), South Australia (Kangaroo Island, Saint Peter and Franklin Islands) (Table 1). Other non-Australian collecting localities were Timor (Kupang Bay), Mauritius, and the Cape of Good Hope.

The taxonomic status of every Lamarckian species, whatever its origin, is presented or briefly discussed hereafter. As for the species collected during the Baudin expedition, their drawings are reproduced (Lesueur's watercolours). Among them are those that, although sorted by Lamarck in 1804 and drawn by Lesueur, were not reported in Lamarck's (1816) treatise. The latter were described by subsequent authors and are presented under their original names.

The species are presented according to the alphabetical order of the specific names used in the original descriptions. Information provided consists of: the species name, the original bibliographic reference, the species current status (possibly, revised), the examined material, the species distribution, any additional relevant information (under the heading 'Remark').

**MATERIAL AND METHODS**

Two lists of asteroids have been drawn up. The first consists in all the new species established by Lamarck in his 1816 publication, whatever their geographical origin. The second brings together the species collected during the Baudin expedition (1800-1804), mainly in Australia and Tasmania. These were all drawn by Lesueur, and deposited in the Muséum where Lamarck received them in June 1804. The identifications were made from photographs of Lesueur's original drawings.

Whether or not the species are still present in the MNHN, the two lists make it possible to reconstruct the Parisian asteroid collection and its singularity at the beginning of the 19th century.

#### ABBREVIATIONS

MHNN Muséum d'Histoire naturelle du Havre, Le Havre;  
MNHN Muséum national d'Histoire naturelle, Paris.

#### LIST OF ASTEROID SPECIES

##### *africanus* Müller & Troschel, 1842, *Asteracanthion* (Fig. 1)

*Asteracanthion africanus* Müller & Troschel, 1842: 15.

*Marthasterias africana* – Wright *et al.* 2016: 446.

CURRENT STATUS. — *Marthasterias africana* (Müller & Troschel, 1842).

MATERIAL EXAMINED. — MHNN; Lesueur drawings collection; ref. 74026; Baudin expedition; Péron and Lesueur leg.

DISTRIBUTION. — Southernmost part of Africa.

#### REMARK

Now recognised as a valid species, *M. africana*, since its description in 1842, was considered a variety or form of the common European asteroid *Marthasterias glacialis* (Linnaeus, 1758) (e.g. Mortensen 1933; Clark & Courtman-Stock 1976). Péron and Lesueur collected individuals of this common species when staying in the Cape of Good Hope area on their way back to France. Péron and Lesueur's material of *A. africanus* could not be found in the MNHN.

##### *angulatus* Müller & Troschel, 1842, *Archaster* (Fig. 2)

*Archaster angulatus* Müller & Troschel, 1842: 66. — Sukarno & Jangoux 1977: 830. — Clark 1993: 238.

CURRENT STATUS. — *Archaster angulatus* Müller & Troschel, 1842.

MATERIAL EXAMINED. — MHNN; Lesueur drawings collection; ref. 74044 and 74060; Baudin expedition; Péron and Lesueur legs.

DISTRIBUTION. — The species commonly occurs along the west and north coasts of Australia; it is also reported from South China Sea and the Philippines.

#### REMARK

Péron and Lesueur's material of *A. angulatus* could not be found in the MNHN.

##### *australiae* Döderlein, 1915, *Anthenea* (Fig. 3)

*Anthenea australiae* Döderlein, 1915: 52.

TABLE 1. — Baudin expedition: releases and moorings.

Areas of collecting	Periods of collecting
Geographe Bay	31.V-9.VI.1801
Shark Bay, Barren Islands (1 <sup>st</sup> stay)	29.VI-11.VII.1801
Depuch Island	17-18.VII.1801
Kupang Bay, Timor (1 <sup>st</sup> stay)	22.VIII-13.XI.1801
D'Entrecasteaux Channel, Tasmania	20.I-17.II.1802
Maria Island, Tasmania	17-22.II.1802
Port Jackson (Sydney)	17.VI-18.XI.1802
King Island, Tasmania	7-13.XII.1802
Kangaroo Island	6.I-1.II.1803
Saint Peter and Franklin Islands	7-11.II.1803
King George Sound	18.II-1.III.1803
Shark Bay (2 <sup>nd</sup> stay)	19-23.III.1803
Kupang Bay, Timor (2 <sup>nd</sup> stay)	6.V-3.VI.1803
Mauritius	7.VIII-16.X.1803
Cape of Good Hope	5-26.I.1804

CURRENT STATUS. — *Anthenea australiae* Döderlein, 1915.

MATERIAL EXAMINED. — MNHN-IE-2014-542; 1 specimen; Baudin expedition (1800-1804); Péron and Lesueur leg. [formerly identified as syntype of *Asterias pentagonula*] • MNHN-IE-2014-543; 1 specimen; same origin as precedent [formerly identified as syntype of *Asterias pentagonula*] • MHNN; Lesueur drawings collection; ref. 74052; Baudin expedition.

DISTRIBUTION. — West and north-west Australian coasts.

#### REMARK

The MNHN houses two individuals of Döderlein's *Anthenea australiae* under the name *Anthenea pentagonula* (Lamarck, 1816), a misidentification resulting from an earlier confusion about the status of Lamarck's *Asterias pentagonula* (further explanation under that species).

##### *calcar* var. *octogona* Lamarck, 1816, *Asterias* (Fig. 4)

*Asterias calcar* var. *octogona* Lamarck, 1816: 557.

*Asteriscus australis* (part) Müller & Troschel, 1842: 43.

*Meridiastra calcar* – Clark 1993: 224. — O'Loughlin & Waters 2004: 3.

*Patiriella calcar* – Clark *in* Clark & Mah 2001: 252.

CURRENT STATUS. — *Meridiastra calcar* (Lamarck, 1816).

MATERIAL EXAMINED. — Australia • MNHN-IE-2014-248; holotype; King George Sound, Albany; Baudin expedition (1800-1804); Péron and Lesueur leg. • MHNN; Lesueur drawings collection ref. 74039; Baudin expedition.

DISTRIBUTION. — South and east coasts of Australia, Tasmania.

#### REMARKS

Three varieties of *Asterias calcar* were briefly described by Lamarck – *viz.* *hexagona*, *octogona* and *quinqueangula* – whose individuals were collected in Australian waters (King George Sound [Albany], West Australia) and are still in the MNHN.



FIG. 1. — *Asteracanthion africanus* Müller & Troschel, 1842: **A, B**, abactinal (**A**) and actinal (**B**) surfaces; **C, D**, arm cross sections with gonad structure (**D**); **E**, arm actinal surface showing adambulacral spines; **F**, abactinal spines surrounded by rings of crossed pedicellariae (Lesueur collection 74026, details, courtesy of MHNH).

Lamarck reported their colour in life from a Lesueur drawing and without distinguishing the varieties (“Cette astérie est rouge, violette, brillante de couleur, et ressemble à une fleur lorsqu’elle est vivante [this sea star is red, violet, of brilliant colours and looks like a flower when alive]”). Lesueur’s drawings indicate these colours should at least characterize individuals of the variety *octogona*.

The type specimen of *Asterias calcar* var. *octogona* was not recognised by Müller & Troschel (1842) who made it one of the types of their new species, *Asteriscus australis*.

*calcar* var. *hexagona* Lamarck, 1816, *Asterias* (Fig. 5)

*Asterias calcar* var. *hexagona* Lamarck, 1816: 557.

*Asteriscus australis* (part.) Müller & Troschel, 1842: 43.

*Meridiastra gunni* – Clark 1993: 225. — O’Loughlin & Waters 2004: 3.

CURRENT STATUS. — *Meridiastra gunni* (Gray, 1840).

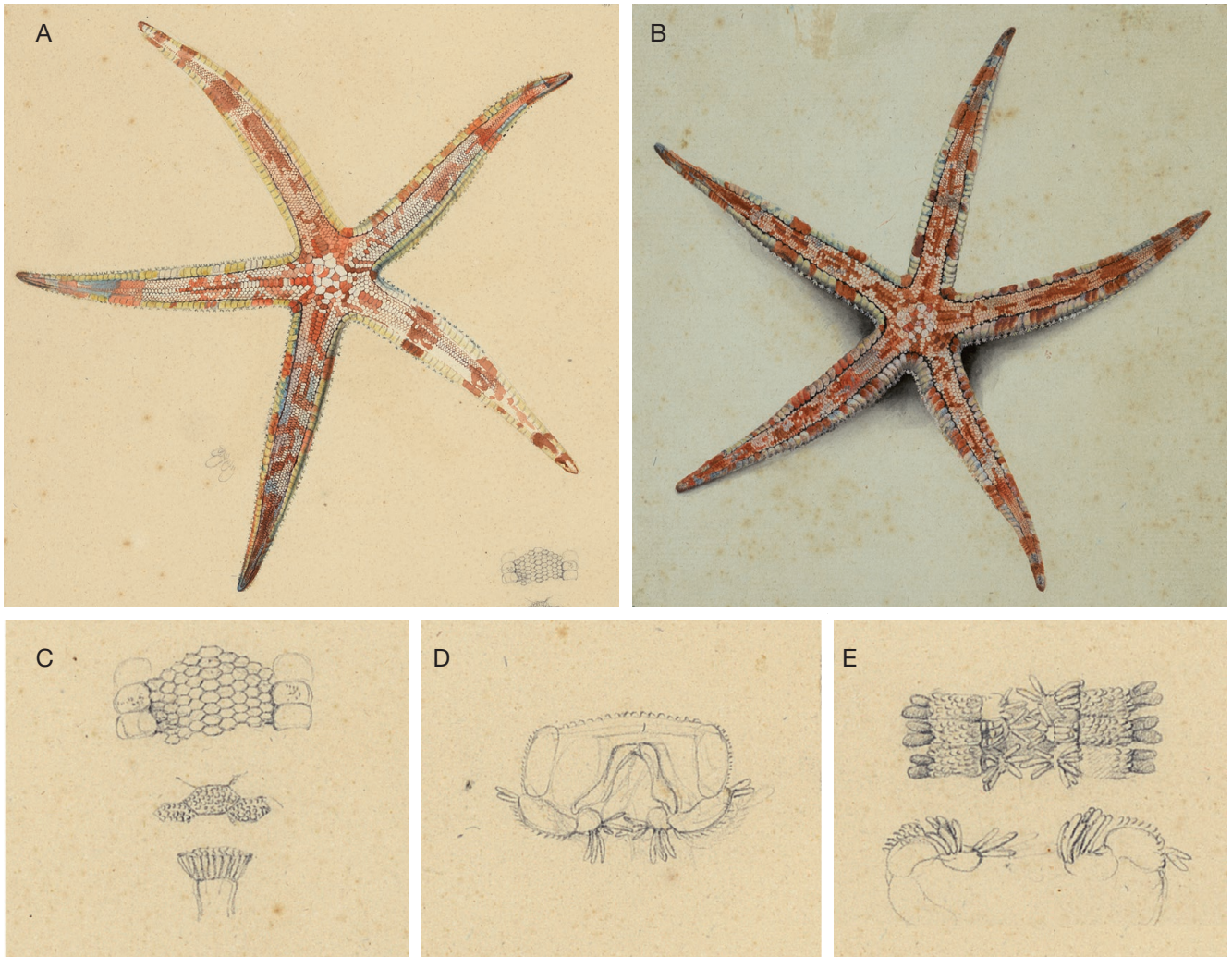


FIG. 2. — *Archaster angulatus* Müller & Troschel, 1842: **A, B**, abactinal surface of two individuals; **C**, arrangement and details of abactinal paxillae; **D**, arm cross-section showing the arrangement of arm plates; **E**, adambulacral armament and inferomarginal plates (Lesueur collection 74044 and 74060 details, courtesy of MHNH).

MATERIAL EXAMINED. — [MNHN-IE-2014-508](#); holotype; King George Sound, Albany; Baudin expedition (1800-1804); Péron and Lesueur leg. • MHNH; Lesueur drawings collection; ref. 74003; Baudin expedition.

DISTRIBUTION. — SW to SE Australia, Tasmania.

#### REMARK

The type specimen of *Asterias calcar* var. *hexagona* was not recognised by Müller & Troschel (1842) who made it one of the types of their new species, *Asteriscus australis*.

*calcar* var. *quinqueangula* Lamarck, 1816, *Asterias*  
(Fig. 15C)

*Asterias calcar* var. *quinqueangula* Lamarck, 1816: 557.

*Patiriella regularis* – Clark 1993: 226.

CURRENT STATUS. — *Asterias calcar* var. *quinqueangula* is newly synonymized here with *Parvulastra exigua* (Lamarck, 1816).

MATERIAL EXAMINED. — Australia • [MNHN-IE-2014-30](#): *Asterias calcar* var. *quinqueangula*; 4 syntypes; Australia (King George Sound, Albany); Baudin expedition (1800-1804); Péron and Lesueur leg.

#### REMARK

Since the publication of Perrier (1875: 299), Lamarck *quinqueangula* variety was considered a synonym of the common New Zealand asterinid, *Patiriella regularis* (Verrill, 1867). Yet this should be reconsidered. Indeed, although the presence of *P. regularis* in Australian waters, mostly Tasmanian, is proven, this presence is however recent. In fact *P. regularis*, a species endemic to New Zealand, is said to have invaded Australian waters in the 20th century after 1930 (Dartnall 1969). This makes it rather unlikely that it was collected by Péron and Lesueur in South Australia or Tasmania in the early 19th century. The status of *quinqueangula* variety is discussed further under the species *Asterias exigua*.

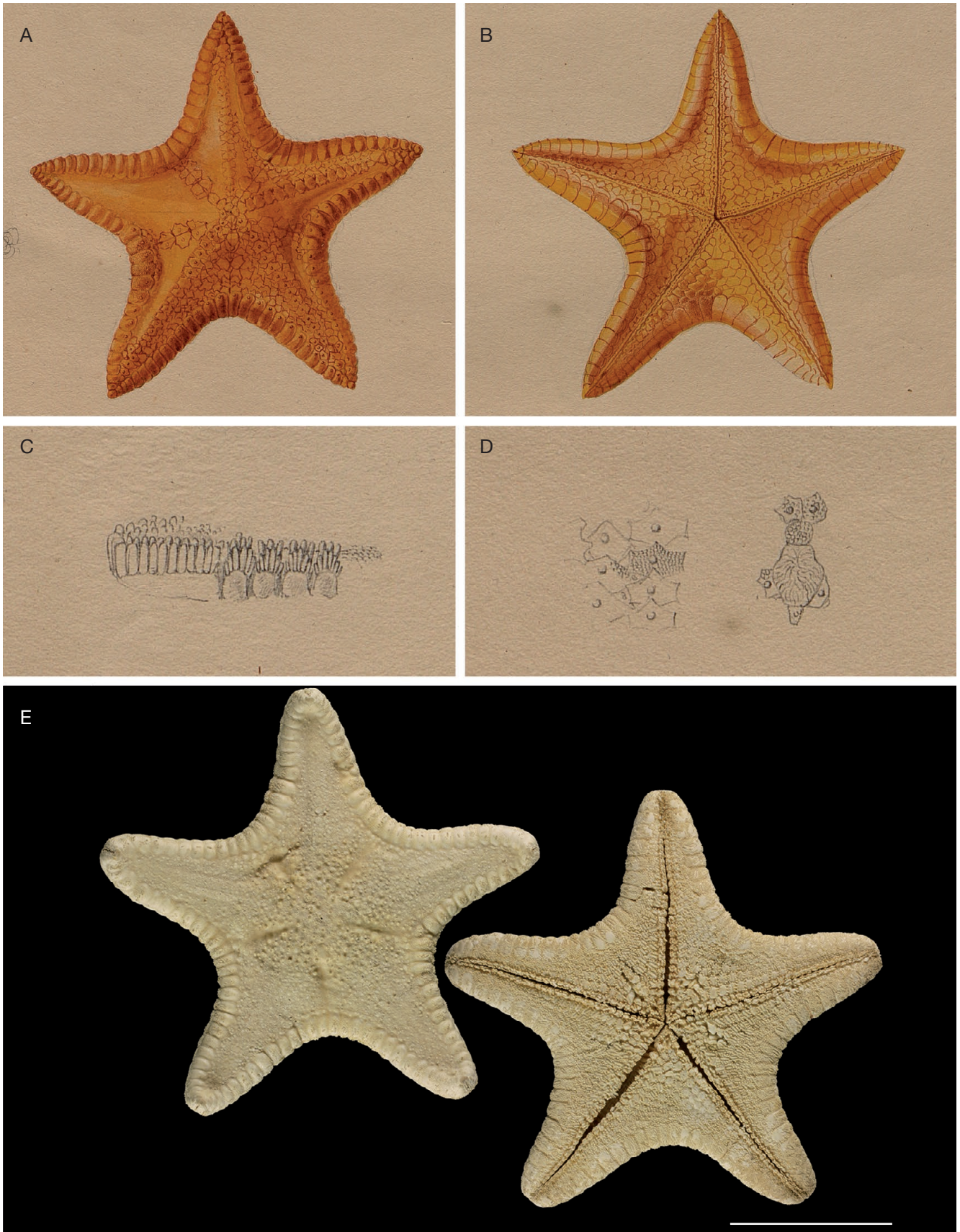


FIG. 3. — *Anthenea australiae* Döderlein, 1915: **A, B**, abactinal and actinal surfaces; **C**, interradial arc and adambulacral spines and plates; **D**, madreporite and abactinal plates; **E**, specimen of *A. australiae* from the Baudin expedition [syntype of *Asterias pentagonula*] (**A-D**, Lesueur collection 74052, details, courtesy of MHNH; **E**, MNHN-IE-2014-543). Scale bar: D, 50 mm.



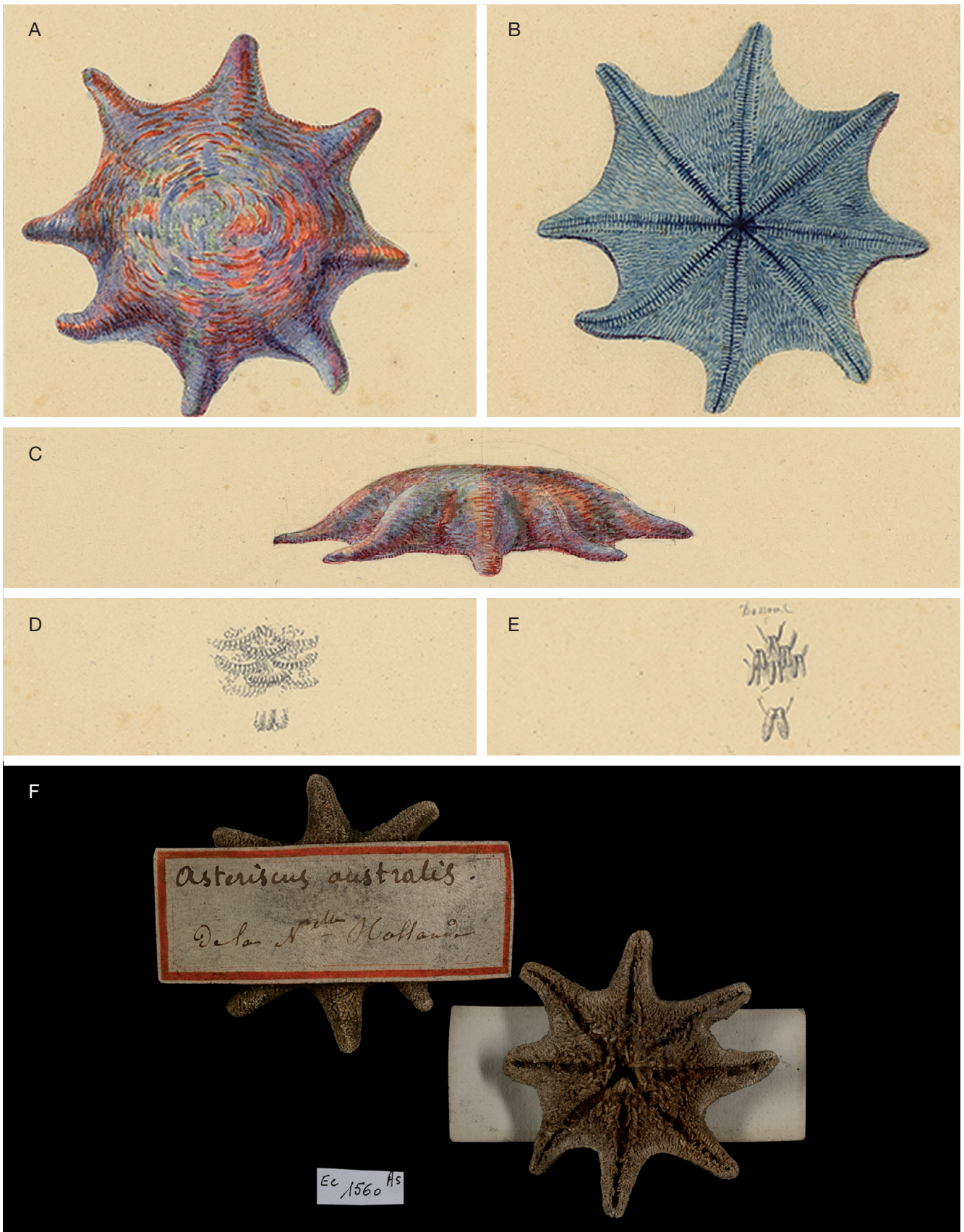


FIG. 4. — *Asterias calcar* var. *octogona* Lamarck, 1816: **A, B**, abactinal (**A**) and actinal (**B**) surfaces; **C**, profile view; **D**, armament of abactinal plates; **E**, actinolateral plates and adambulacral spines (text: “dessous” [underside]); **F**, holotype of *Meridiastra calcar* (Lamarck, 1816) (**A-E**, Lesueur collection ref. 74039, details, courtesy of MHNH; **F**, MNHN-IE-2014-248). Scale bar: **F**, 20 mm.

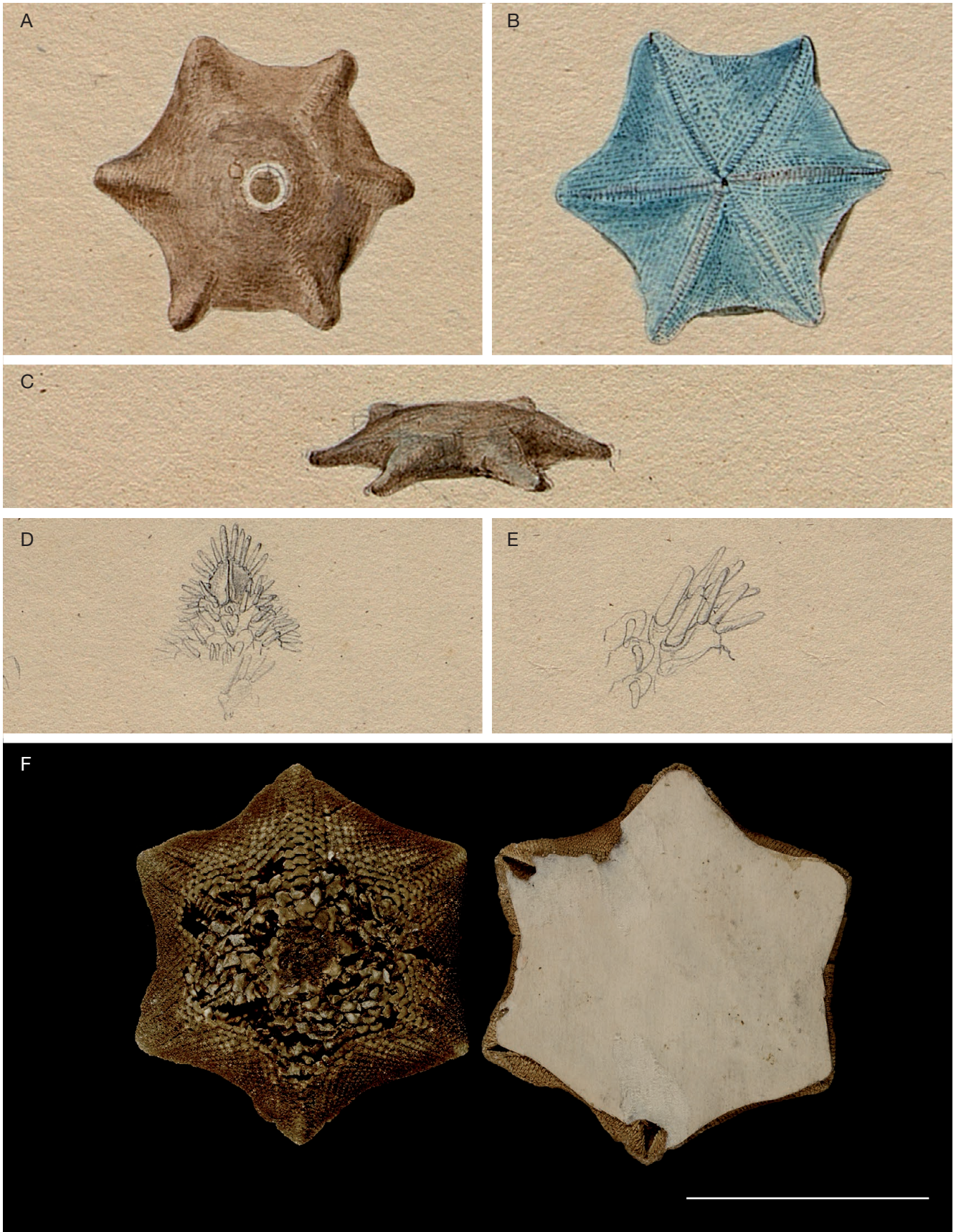


FIG. 5. — *Asterias calcar* var. *hexagona* Lamarck, 1816: **A**, **B**, abactinal (**A**) and actinal (**B**) surfaces; **C**, profile view; **D**, interradial arc; **E**, adambulacral spines; **F**, holotype of *Meridiastra gunni* (**A-E**, Lesueur collection ref. 74003, details, courtesy of MHNH; **F**, [MNHN-IE-2014-508](#)). Scale bar: 50 mm.

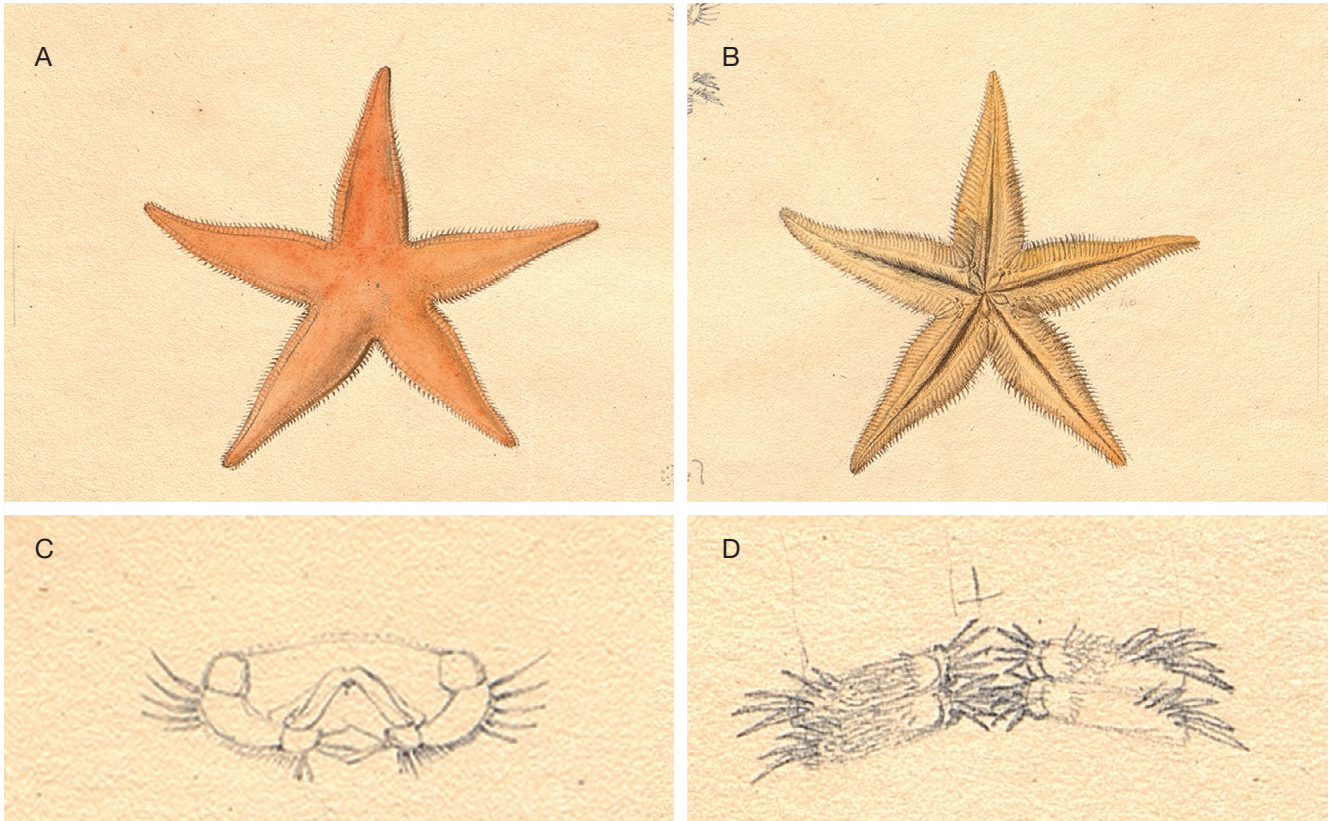


FIG. 6. — *Asterias calcitraba* var. 1 Lamarck, 1816: **A, B**, abactinal (**A**) and actinal (**B**) surfaces; **C**, arm cross-section showing arrangement of skeletal plates; **D**, ambulacral armament and inferomarginal plates (Lesueur collection 74012, details, courtesy of MHNH).

*calcitraba* Lamarck, 1816, *Asterias*

*Asterias calcitraba* Lamarck, 1816: 563.

REMARK

Lamarck (1816) reported that two varieties of *Asterias calcitraba* (varieties 1 and 2) were collected by Péron and Lesueur, presumably in the South Seas. While *A. calcitraba* clearly belongs to the astropectinid family, the descriptions given by Lamarck were too vague to allow an identification and the name was considered a *nomen dubium* (Döderlein 1917: 183; Clark 1989: 254). However, several drawings of Lesueur represent two astropectinid species that are not uncommon in Australian waters, and we can reasonably suggest they could represent the two varieties of Lamarck's *A. calcitraba*.

*calcitraba* var. 1 Lamarck, 1816, *Asterias*  
(Fig. 6)

*Asterias calcitraba* Lamarck, 1816: 563.

*Astropecten calcitraba* – Clark 1989: 254.

CURRENT STATUS. — *Asterias calcitraba* var. 1 is newly synonymized here with *Bollonaster pectinatus* (Sladen, 1883).

MATERIAL EXAMINED. — MHNH; Lesueur drawings collection; ref. 74012; Baudin expedition; Péron and Lesueur leg.

DISTRIBUTION. — The species occurs in temperate water of southern Australia and around Tasmania.

REMARKS

Péron and Lesueur's material of *A. calcitraba* var. 1 could not be found in the MNHN.

Lesueur detailed drawings of both arm cross section and arm actinal surface (Fig. 6C and D) allow to identify the species as *Bollonaster pectinatus*.

*calcitraba* var. 2 Lamarck, 1816, *Asterias*  
(Fig. 7)

*Asterias calcitraba* Lamarck, 1816: 563.

CURRENT STATUS. — *Asterias calcitraba* var. 2 is newly synonymized here with *Astropecten vappa* Müller & Troschel, 1843.

MATERIAL EXAMINED. — MHNH; Lesueur drawings collection; ref. 74011; Baudin expedition (1800-1804); Péron and Lesueur leg.

DISTRIBUTION. — From west and north Australia up to Sri Lanka and South China sea.

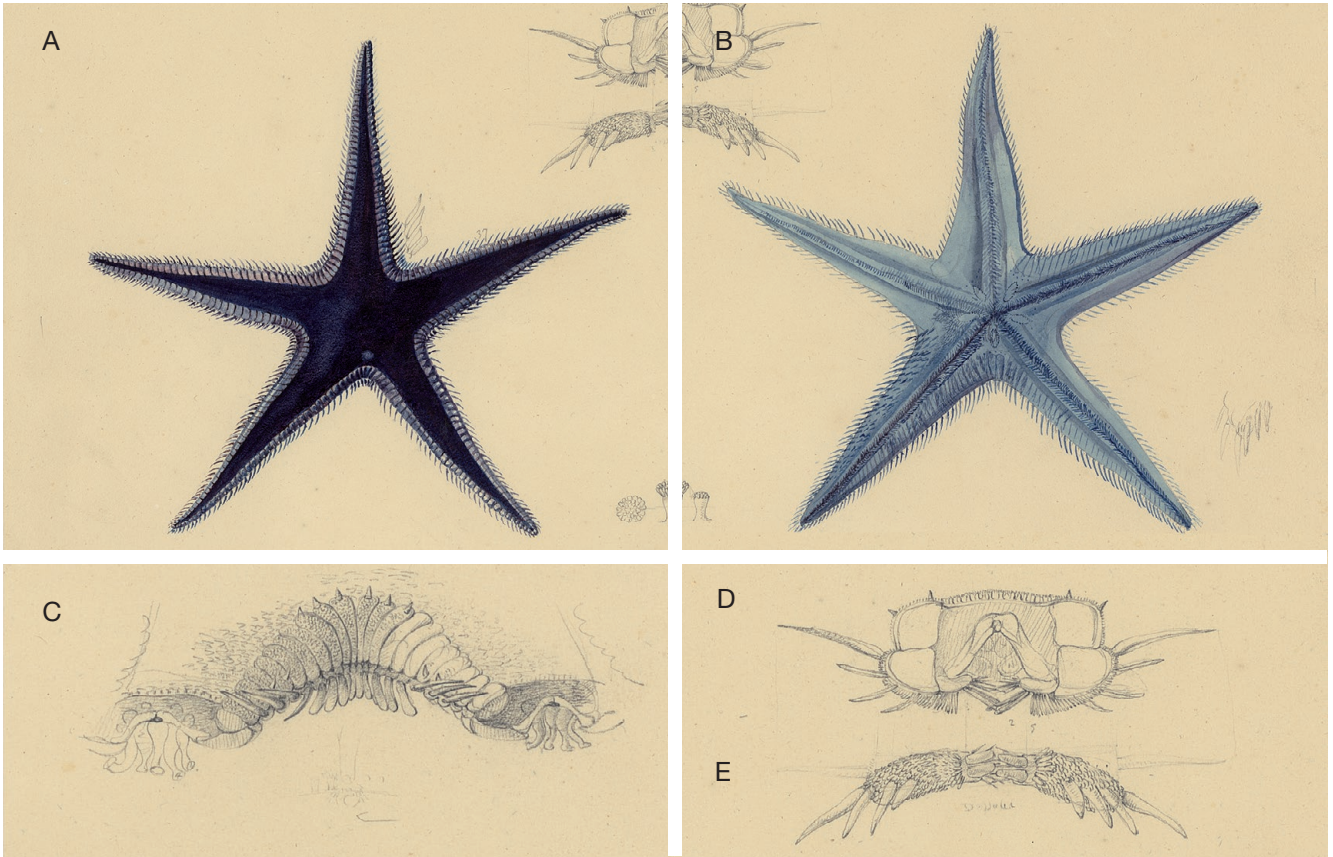


FIG. 7. — *Asterias calcitraba* var. 2 Lamarck, 1816: **A, B**, abactinal (**A**) and actinal (**B**) surfaces; **C**, interradial marginal plates; **D**, arm cross-section showing the arrangement of skeletal plates; **E**, ambulacral armature and inferomarginal plates (Lesueur collection 74011, details, courtesy of MHNH).

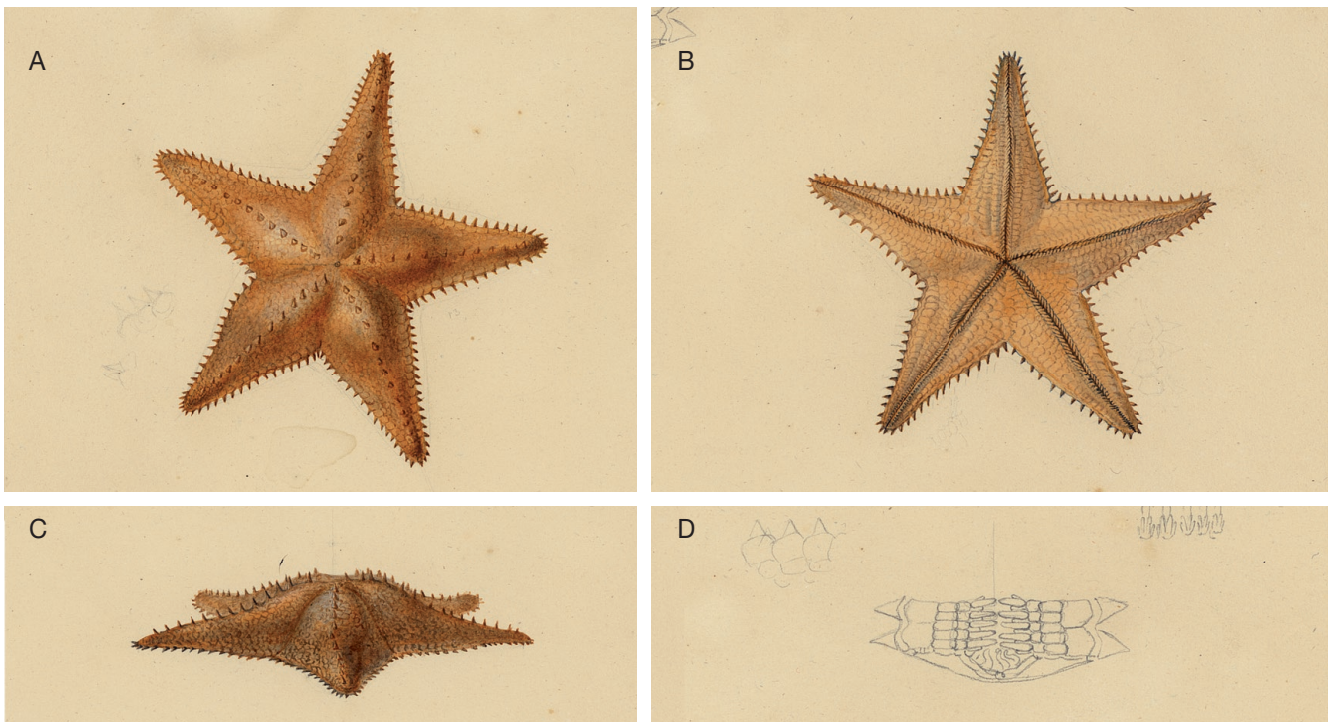


FIG. 8. — *Asterias carinifera* Lamarck, 1816: **A, B**, abactinal (**A**) and actinal (**B**) surfaces; **C**, profile view; **D**, ambulacral armament and actinolateral and inferomarginal plates (**A-D**, Lesueur collection 74041, details, courtesy of MHNH).

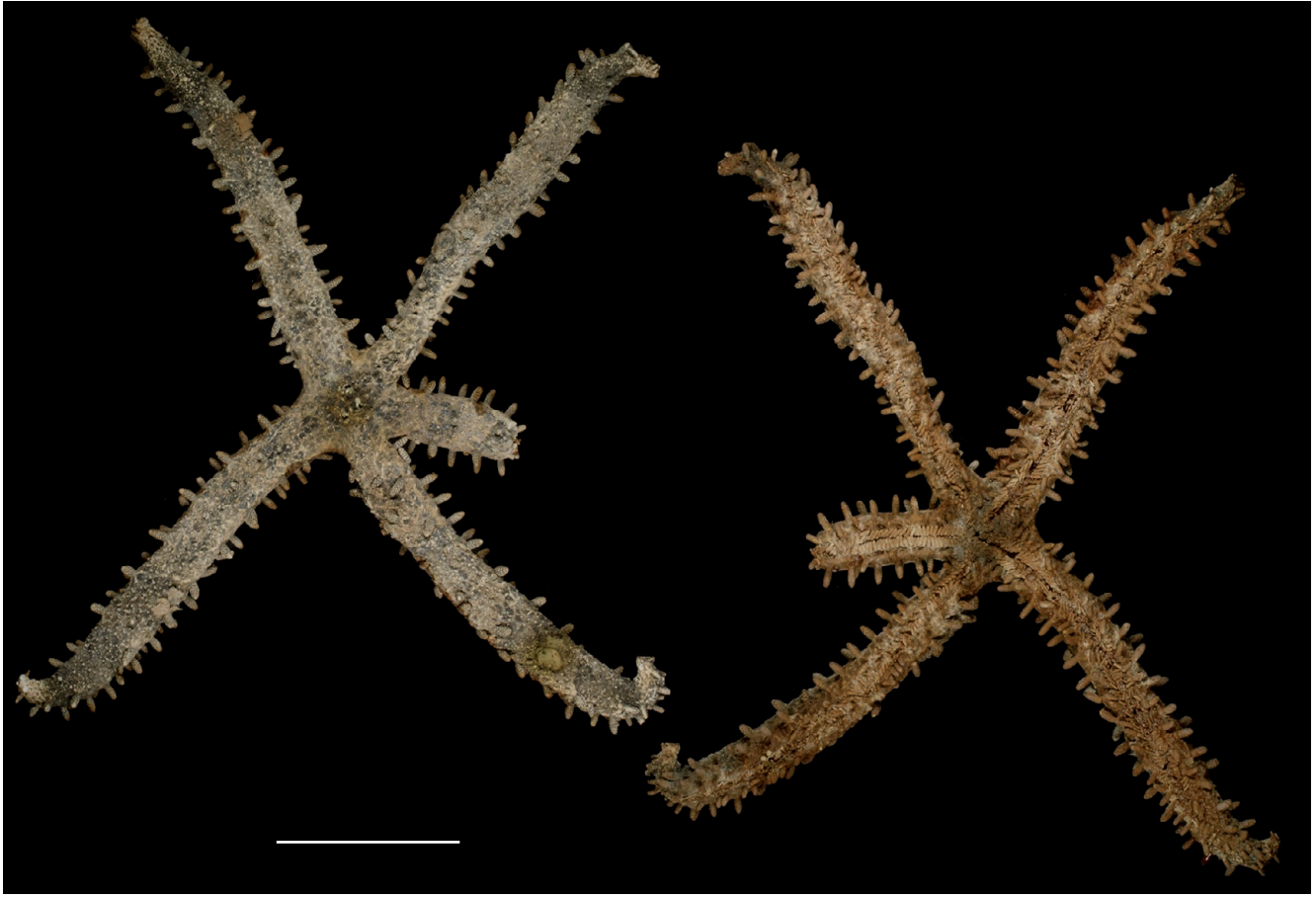


FIG. 9. — *Asterias clavigera* Lamarck, 1816: abactinal and actinal surfaces of a syntype (MNHN-IE-2014-71). Scale bar: 50 mm.

REMARK

Péron and Lesueur's material of *A. calcitrata* var. 2 could not be found in the MNHN.

Lesueur detailed drawings of both arm cross section and arm actinal surface (Fig. 7C and D) allow to identify the species as *Astropecten vappa*.

*carinifera* Lamarck, 1816, *Asterias*  
(Fig. 8)

*Asterias carinifera* Lamarck, 1816: 556.

*Asteropsis carinifera* – Clark 1993: 320.

CURRENT STATUS. — *Asteropsis carinifera* (Lamarck, 1816).

MATERIAL EXAMINED. — MNHN; Lesueur collection 74041; Baudin expedition (1800-1804); Péron and Lesueur leg.

DISTRIBUTION. — Widely distributed in the tropical Indo-West Pacific.

REMARK

Lamarck's Latin diagnosis for *Asterias carinifera* is as follows: “*angulis prorrectis; margine aculato; dorso carinis quinque aculatis muricato* [angles well marked; margin spiny; carinated arms each with a row of prominent spines]”. This definition

clearly corresponds to adult individuals of *A. carinifera* (see further comment under the species *Asterias punctata* Lamarck, 1816). Péron and Lesueur's material of *A. carinifera* could not be found in the MNHN.

*clavigera* Lamarck, 1816, *Asterias*  
(Fig. 9)

*Asterias clavigera* Lamarck, 1816: 562.

*Mithrodia clavigera* – Clark 1993: 324.

CURRENT STATUS. — *Mithrodia clavigera* (Lamarck, 1816).

MATERIAL EXAMINED. — Mauritius • MNHN-IE-2014-71: 2 syntypes; Baudin expedition (1800-1804); Péron and Lesueur leg.

DISTRIBUTION. — Widely distributed in the tropical Indo-West Pacific; a few records in tropical Atlantic (Central America).

REMARK

Though the species was collected by Péron and Lesueur during the Baudin expedition, no drawings of this species could be found in the Lesueur collection at Le Havre Museum.

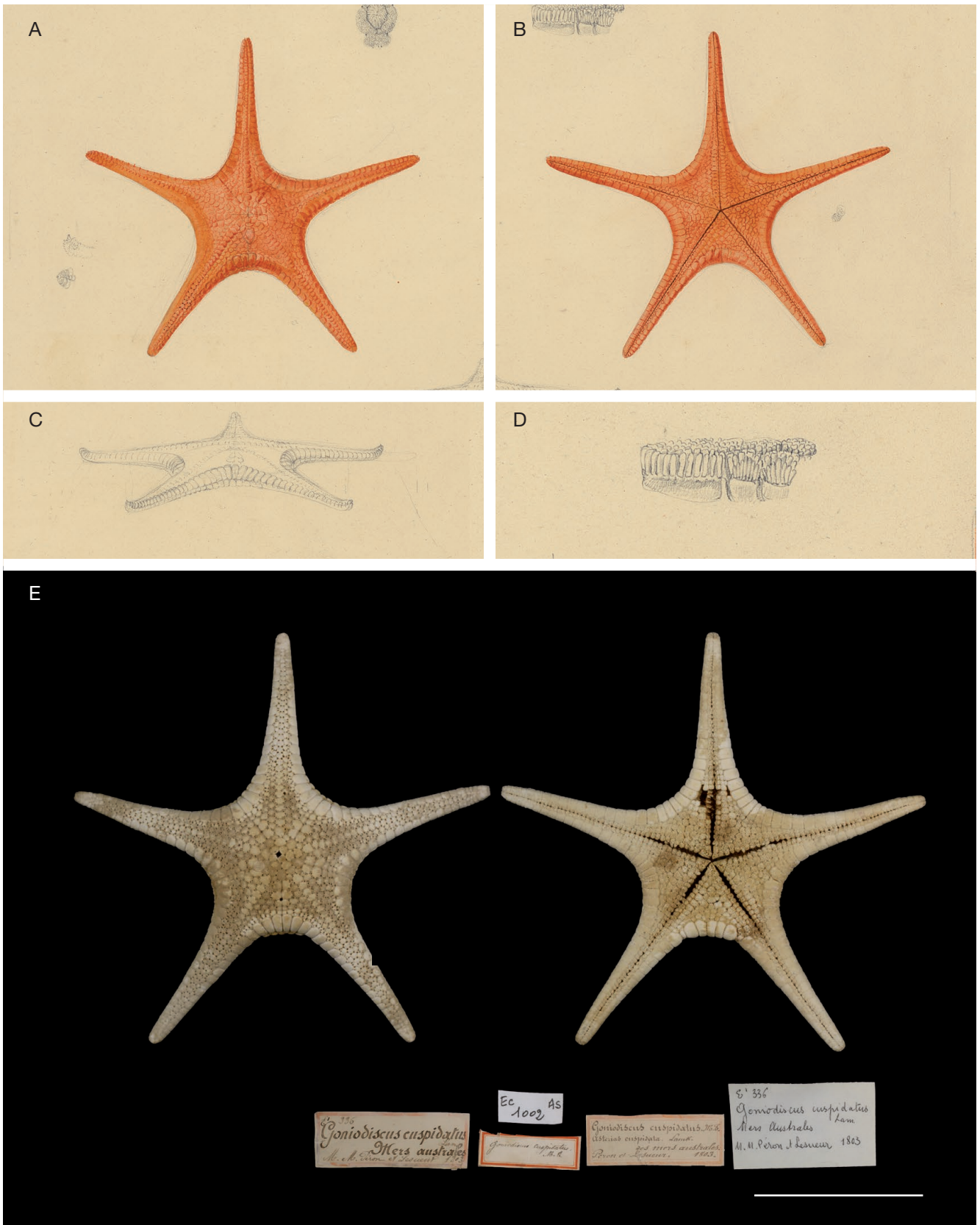


FIG. 10. — *Asterias cuspidata* Lamarck, 1816: **A, B**, abactinal (**A**) and actinal (**B**) surfaces; **C**, profile view; **D**, interradian arc and ambulacral armament; **E**, holotype of the species (**A-D**, MHNH, Lesueur collection 74022, details, courtesy of MHNH; **E**, MNHN-IE-2014-3). Scale bar: E, 50 mm.

*cuspidata* Lamarck, 1816, *Asterias*  
(Fig. 10)

*Asterias cuspidata* Lamarck, 1816: 553.

*Goniaster tessellatus* – Clark 1993: 256.

CURRENT STATUS. — *Asterias cuspidata* is transferred here to the genus *Mediaster* Stimpson, 1857 as *Mediaster cuspidatus* (Lamarck, 1816) n. comb.

MATERIAL EXAMINED. — South Seas • MNHN-IE-2014-3; holotype; Baudin expedition (1800-1804); Péron and Lesueur leg. • MHNH; Lesueur drawings collection; ref. 74022; Baudin expedition.

DISTRIBUTION. — South Seas. (Note that the related species *Mediaster australiensis* H. L. Clark, 1916 was found in Australia [Victoria, Bass Strait] and Tasmania.)

REMARKS

Both Lesueur's drawings and the original holotype label attest that Lamarck's *Asterias cuspidata* originates from the South Seas. Surprisingly *A. cuspidata* was considered a synonym of the Atlantic *Asterias tessellata* Lamarck, 1816, which is more than unlikely both geographically and morphologically. Lamarck himself reported that *A. cuspidata* "differs from *Asterias tessellata* because its angles continue with long spikes resembling straight horns or rays [On l'en distingue par ses angles prolongés en longues pointes comme des cornes droites ou des rayons]". In fact, the *cuspidata-tessellata* problem results from the confusion between *Asterias cuspidata* Lamarck and *Goniaster cuspidatus* Gray, 1840 the latter being indeed synonym of Lamarck's *Asterias tessellata*.

From its overall morphological features, *Asterias cuspidata* belongs to the Goniasteridae, and its closest genus is *Mediaster* Stimpson, 1857. Indeed *A. cuspidata* is clearly related to the Australian species *Mediaster australiensis* H. L. Clark, 1916 (Clark 1916: 30-31, pl. 9), a species known from Bass Strait and around Tasmania. Some differences occur, however, such as the general appearance (the disc area of *A. cuspidata* is narrower giving it a more stellate form) or the occurrence in *A. cuspidata* of a row of enlarged carinal plates. Therefore, awaiting additional information of *M. australiensis* variability, it sounds better to keep the two species separate.

*cylindrica* Lamarck, 1816, *Asterias*  
(Fig. 11)

*Asterias cylindrica* Lamarck, 1816: 567.

*Dactylosaster cylindricus* – Clark 1993: 329.

CURRENT STATUS. — *Dactylosaster cylindricus* (Lamarck, 1816).

MATERIAL EXAMINED. — Mauritius • MNHN-IE-2014-471; holotype; Baudin expedition (1800-1804); Péron and Lesueur leg. • MHNH; Lesueur drawings collection; ref. 74014; Baudin expedition.

DISTRIBUTION. — The species is found in the tropical Indo-West Pacific.

REMARK

According to Perrier (1869; 1875), the two individuals collected by Péron and Lesueur in Mauritius in 1803 belong to two species that differ, among other characters, by the presence (*D. cylindricus*) or absence of enlarged granules on the central part of abactinal plates. He created the species *Ophidiaster purpureus* Perrier, 1869 (see further under that species) to accommodate the second individual.

*decanus* Müller & Troschel, 1843, *Echinaster*  
(Fig. 12)

*Echinaster decanus* Müller & Troschel, 1843: 114.

*Plectaster decanus* – Clark 1996: 244.

CURRENT STATUS. — *Plectaster decanus* (Müller & Troschel, 1843).

MATERIAL EXAMINED. — MHNH; Lesueur drawings collection, ref. 74053 (Baudin expedition, Péron and Lesueur leg.).

DISTRIBUTION. — The species is distributed throughout the south coast of Australia up to Newcastle in New South Wales, and in Tasmania.

REMARK

Péron and Lesueur's material of *Echinaster decanus* could not be found in the MNHN.

*discoidea* Lamarck, 1816, *Asterias*  
(Fig. 13)

*Asterias discoidea* Lamarck, 1816: 554.

*Culcita schmideliana* – Clark 1993: 298.

CURRENT STATUS. — *Culcita schmideliana* (Bruzelius, 1805).

MATERIAL EXAMINED. — MHNH; Lesueur drawings collection; ref. 74006; Baudin expedition; Péron and Lesueur leg.

DISTRIBUTION. — *Culcita schmideliana* commonly occurs in the Indian ocean, along the coast of Africa and the NW coast of Australia.

REMARK

Lamarck's type material could not be found in the MNHN.

*echinophora* Lamarck, 1816, *Asterias*  
(Fig. 14)

*Asterias echinophora* Lamarck, 1816: 560.

*Echinaster (Othilia) echinophorus* – Clark & Downey 1992: 367.

CURRENT STATUS. — *Echinaster (Othilia) echinophorus* (Lamarck, 1816).

MATERIAL EXAMINED. — North America • MNHN-IE-2014-72; 4 syntypes; coast of Virginia; Lamarck collection.

DISTRIBUTION. — From Florida to NE Brazil.

REMARK

Lamarck's type locality is doubtful and the syntypes most probably came from Brazil (Clark & Downey 1992: 370).

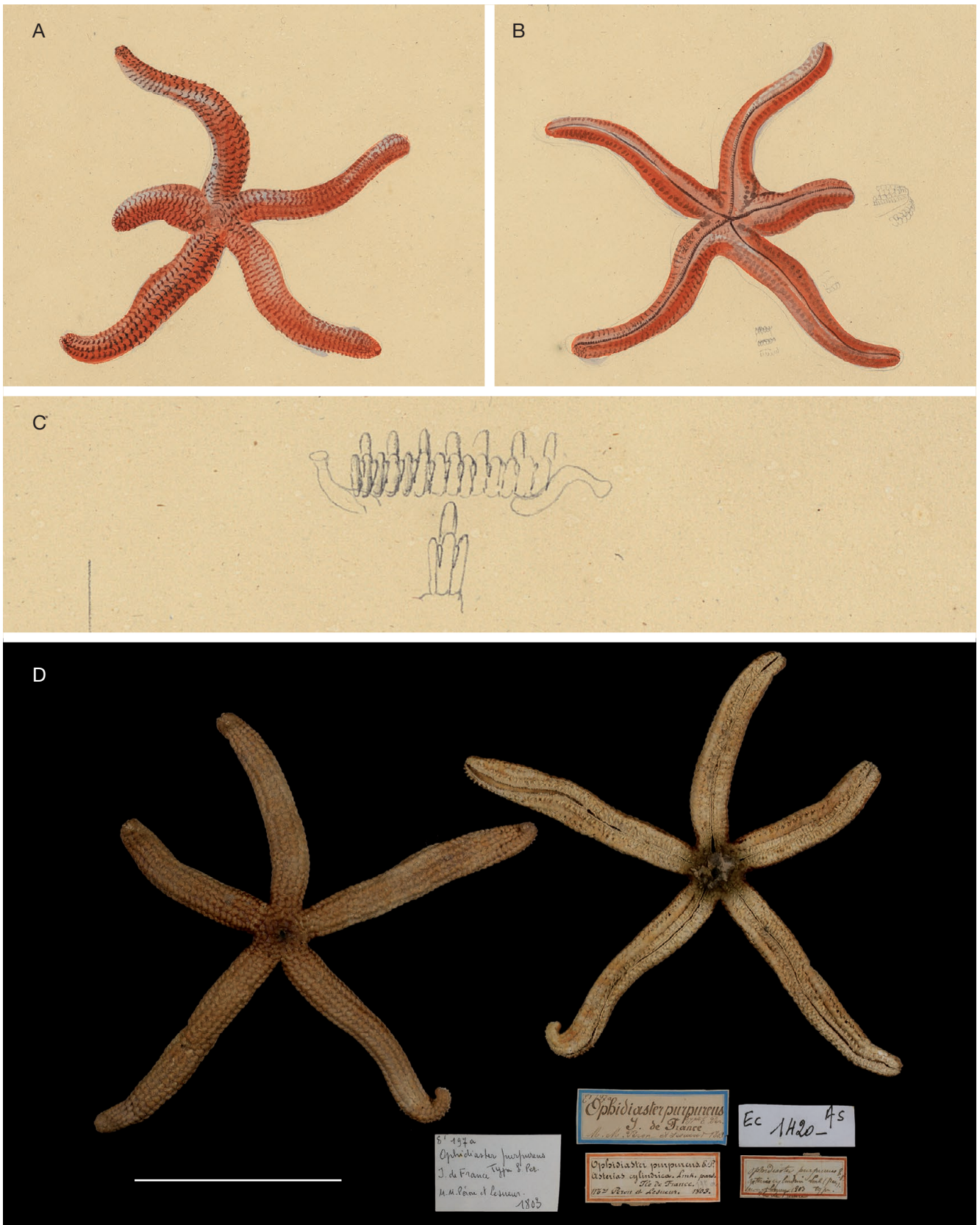


FIG. 11. — *Asterias cylindrica* Lamarck, 1816: **A, B**, abactinal (**A**) and actinal (**B**) surfaces; **C**, adambulacral armament; **D**, holotype of the species (**A-C**, MHNH, Lesueur collection 74014, details, courtesy of MHNH; **D**, MNHN-IE-2014-471). The accompanying labels do not relate to the pictured specimen. The holotype of *O. purpureus* Perrier, 1869 is shown in Figure 32. Scale bar: 50 mm.



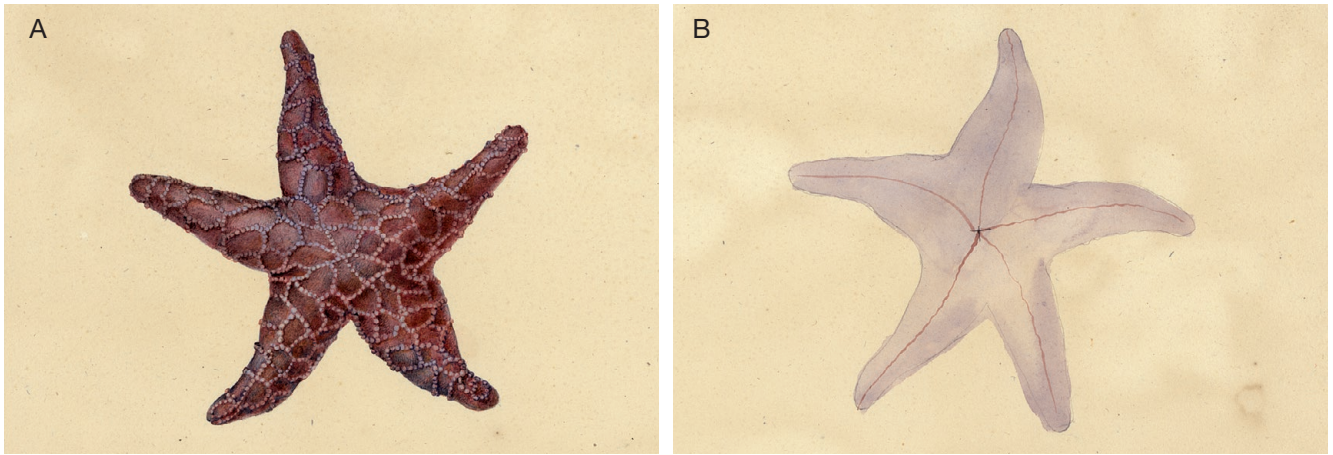


FIG. 12. — *Echinaster decanus* Müller & Troschel, 1843: **A, B**, abactinal (**A**) and actinal (**B**) surfaces (MHNH, Lesueur collection 74053, details, courtesy of MHNH).

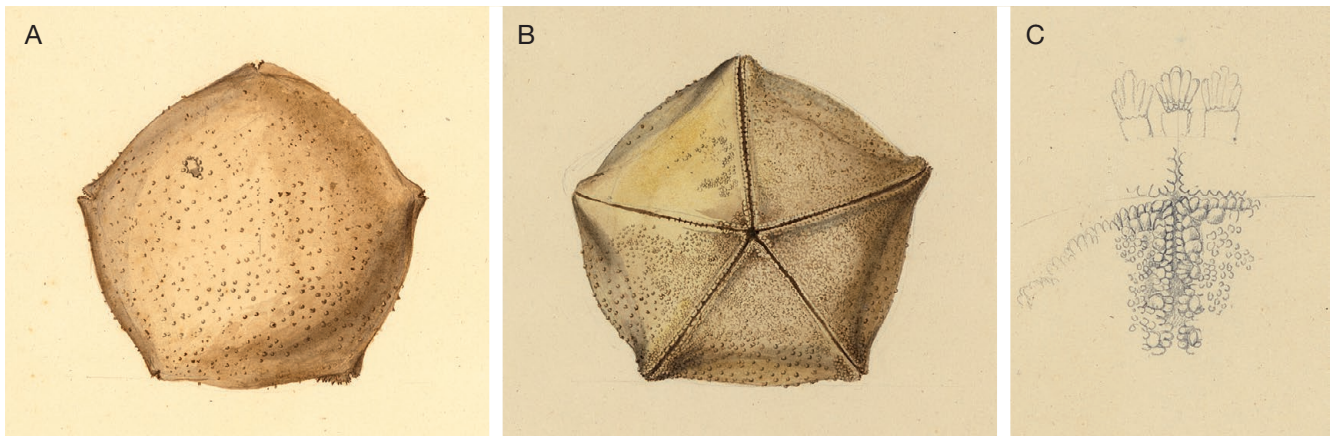


FIG. 13. — *Asterias discoidea* Lamarck, 1816: **A, B**, abactinal (**A**) and actinal (**B**) surfaces; **C**, adambulacral spines (above), interradial arcs (below) (MHNH, Lesueur collection 74006, details, courtesy of MHNH).

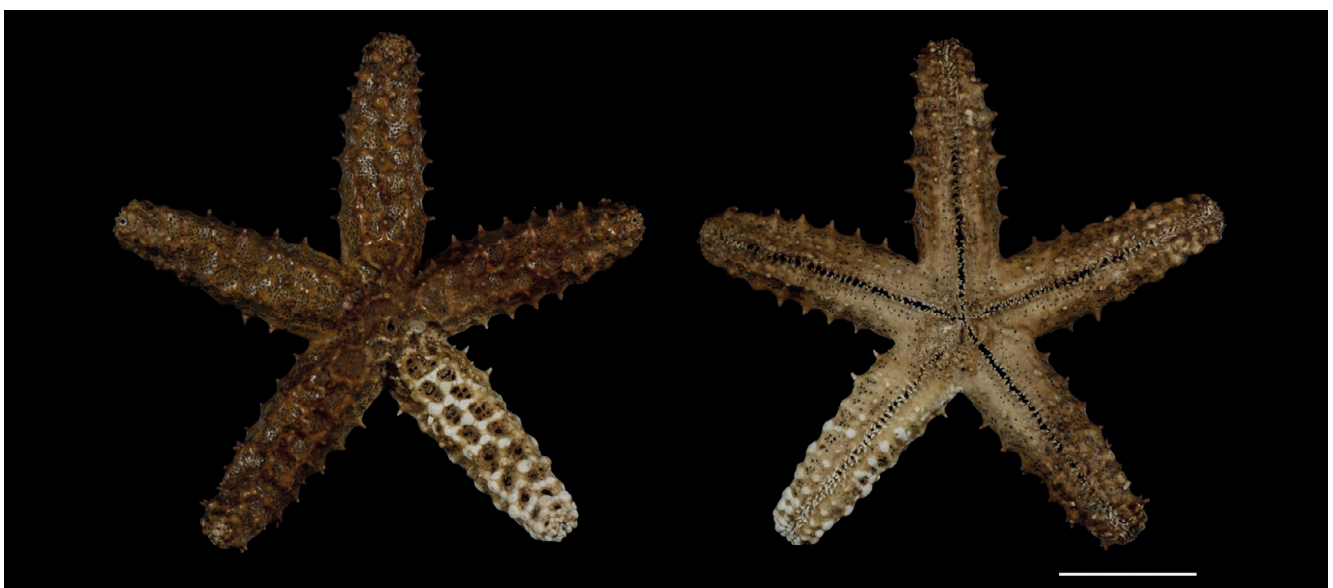


FIG. 14. — *Asterias echinophora* Lamarck, 1816: abactinal and actinal surfaces of a syntype of the species (MHNH-IE-2014-72). Scale bar: 20 mm.



FIG. 15. — *Asterias exigua* Lamarck, 1816: **A**, drawings of Bruguière (1791); **B**, type specimens of *Asterias exigua*. **C**, type specimens of *Asterias calcar* var. *quinqueangula*. **D-F**, Lesueur's drawings of *Asterias exigua*: abactinal (**D**) and actinal (**E**) surfaces, and profile view (**F**) (**B**, MNHN-IE-2014-526; **C**, MNHN-IE-2014-30; **D-F**, MHNH, Lesueur collection 74004, details, courtesy of MHNH).

*exigua* Lamarck, 1816, *Asterias*  
(Fig. 15)

*Asterias exigua* Lamarck, 1816: 554.

*Asterias calcar* var. *quinqueangula* Lamarck, 1816: 557.

*Parvulastra exigua* — O'Loughlin & Waters 2004: 225.

CURRENT STATUS. — *Parvulastra exigua* (Lamarck, 1816).

MATERIAL EXAMINED. — **South Africa** • MNHN-IE-2014-526; *Asterias exigua*; 6 syntypes; Cape of Good, Hope Baudin expedition (1800-1804); Péron and Lesueur leg.

**Australia** • MNHN-IE-2014-30; *Asterias calcar* var. *quinqueangula*; 4 syntypes; Baudin expedition (1800-1804); King George Sound, Albany, Péron and Lesueur leg. • MHNH; Lesueur drawings collection, ref. 74004; Baudin expedition.

DISTRIBUTION. — From the southernmost part of Africa to the south of Australia and Tasmania.



FIG. 16. — *Asterias granifera* Lamarck, 1816: **A**, **B**, abactinal (**A**) and actinal (**B**) surfaces; **C**, arm showing tube feet and adambulacral spines; **D**, holotype of the species (**A-C**, MHNH, Lesueur collection 74046 and 74047, details, courtesy of MHNH; **D**, MNHN-IE-2014-235).

#### REMARKS

According to Lamarck (1816) *Asterias exigua* came from American seas and was the smallest known species of asteroid. As far as size is concerned, he is almost correct. Yet *A. exigua* does not occur in the Atlantic but in the south of Africa and Australia as well as in Tasmania. Indeed the type specimens of *A. exigua* were collected in South Africa by Péron and Lesueur in 1804 (Fig. 15B). Individuals of a most likely similar species had been obtained early in 1803 by the same collectors in SE Australia (King George Sound, Albany). The latter were identified *Asterina calcar* var. *quinqueangula* by Lamarck, who added on a label that they should be considered juvenile individuals (“specimen junius”) (Fig. 15C-F). Comparing the type

specimens of the two Lamarckian species (and to the drawings of Bruguière [1791] to which Lamarck referred, Figure 15A), it is highly likely they are conspecific.

Due to incorrect information (types of *Asterias exigua* presumed loss), Dartnall (1971) designated a neotype for the species. The latter originated from False Bay (South Africa) and is in the Tasmanian Museum, Hobart (ref. TM H508).

*granifera* Lamarck, 1816, *Asterias*  
(Fig. 16)

*Asterias granifera* Lamarck, 1816: 560.

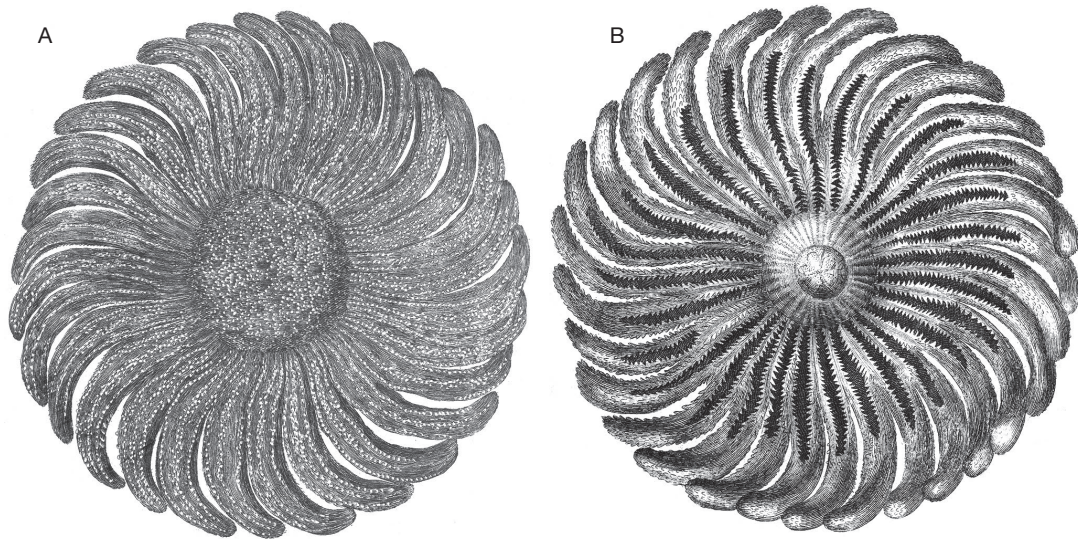


FIG. 17. — *Heliaster helianthus* Lamarck, 1816: Bruguière's (1791) drawings of the abactinal (A) and actinal (B) surfaces of the holotype.

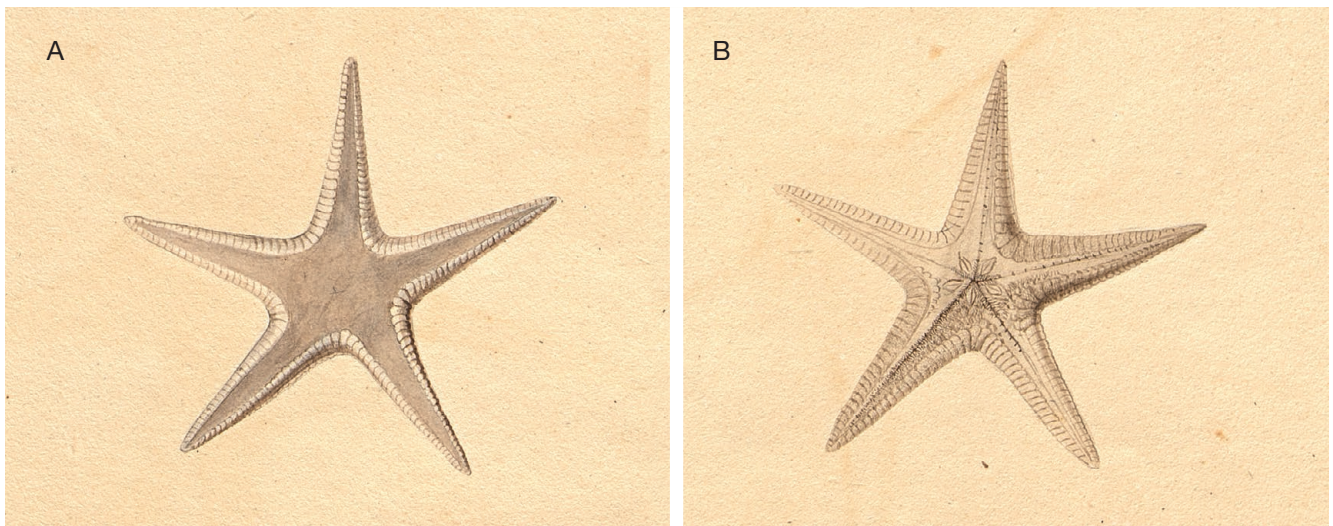


FIG. 18. — *Archaster hesperus* Müller & Troschel, 1840: A, B, abactinal (A) and actinal (B) surfaces (MHNH, Lesueur collection 74010, details, courtesy of MHNH).

*Uniophora granifera* – Clark in Clark & Mah 2001: 305.

CURRENT STATUS. — *Uniophora granifera* (Lamarck, 1816).

MATERIAL EXAMINED. — South Seas • [MNHN-IE-2014-235](#); holotype; Baudin expedition (1800-1804); Péron and Lesueur leg. • MHNH; Lesueur drawings collection; ref. 74046 and 74047; Baudin expedition.

DISTRIBUTION. — South coast of Australia, Tasmania.

*helianthus* Lamarck, 1816, *Asterias*  
(Fig. 17)

*Asterias helianthus* Lamarck, 1816: 558.

*Heliaster helianthus* – Clark in Clark & Mah 2001: 307.

CURRENT STATUS. — *Heliaster helianthus* (Lamarck, 1816).

REMARK

Lamarck only referred to Bruguière's (1791: pl. 108-109) drawings when describing the species. He gave no localities though one could expect the drawn individual came from Chilean coast. Bruguière's material could not be found in the MNHN.

*hesperus* Müller & Troschel, 1840, *Archaster*  
(Fig. 18)

*Archaster hesperus* Müller & Troschel, 1840: 104.

*Craspidaster hesperus* – Clark 1989: 274.

CURRENT STATUS. — *Craspidaster hesperus* (Müller & Troschel, 1840).

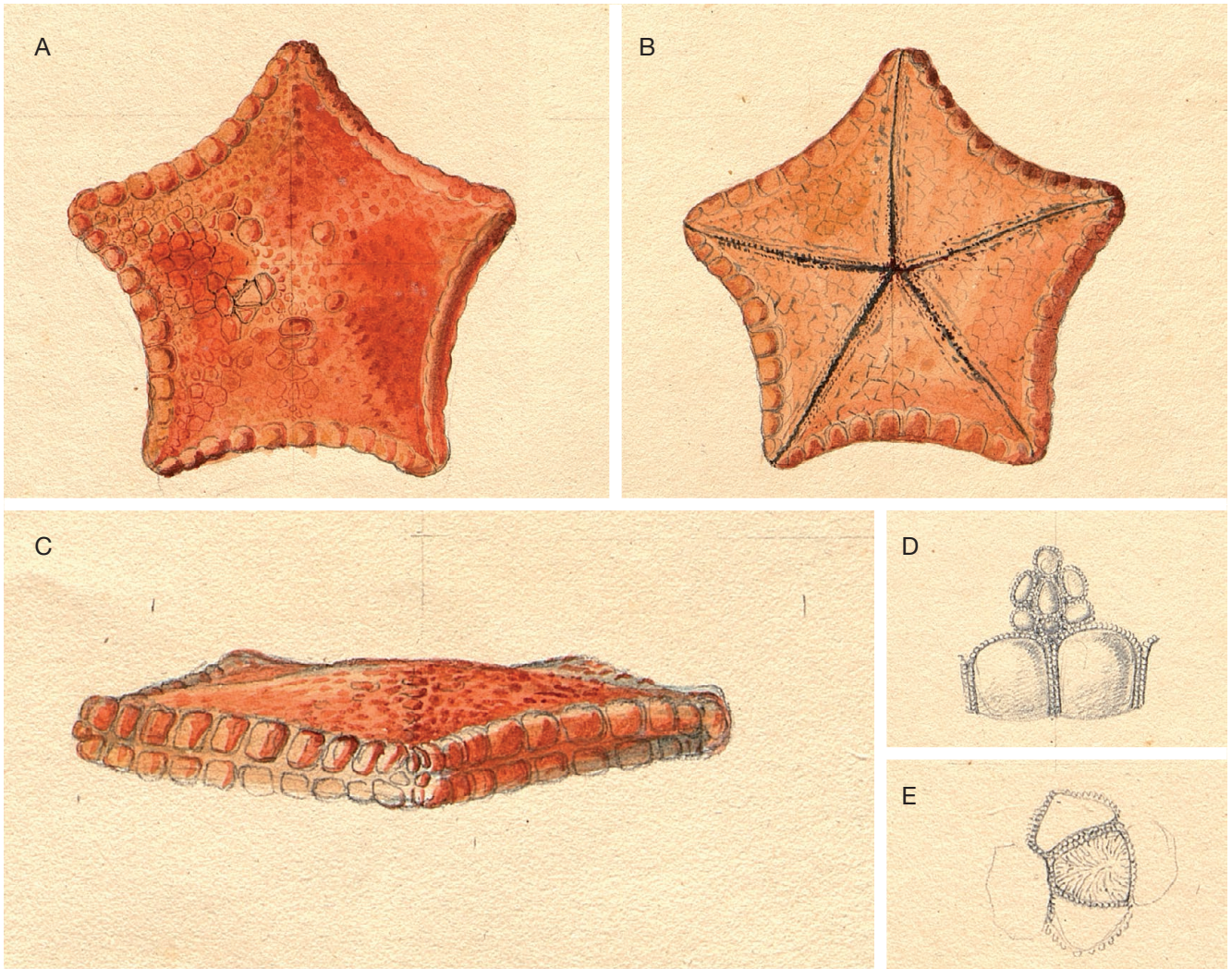


FIG. 19. — *Astrogonium magnificentum* Müller & Troschel, 1842: **A, B**, abactinal (**A**) and actinal (**B**) surfaces; **C**, profile view; **D**, superomarginal and abactinal plates; **E**, madreporite and disc abactinal plates (MHNH, Lesueur collection 74056, details, courtesy of MHNH).

MATERIAL EXAMINED. — Timor • MNHN-IE-2017-560; 2 individuals; Baudin expedition (1800-1804); supposedly from Timor; Péron and Lesueur leg. • MHNH: Lesueur drawings collection, ref. 74010; Baudin expedition.

DISTRIBUTION. — Indonesia, Bay of Bengal, Singapore, Philippines, South China Sea.

*magnificum* Müller & Troschel, 1842, *Astrogonium*  
(Fig. 19)

*Astrogonium magnificentum* Müller & Troschel, 1842: 53.

*Tosia magnifica* – Clark 1993: 289.

CURRENT STATUS. — *Tosia magnifica* (Müller & Troschel, 1842).

MATERIAL EXAMINED. — MHNH; Lesueur drawings collection; ref. 74056; Baudin expedition, Péron and Lesueur leg.

DISTRIBUTION. — South of Australia and Tasmania.

REMARK

Péron and Lesueur's material could not be found in the MHNH.

*milleporella* Lamarck, 1816, *Asterias*  
(Fig. 20)

*Asterias milleporella* Lamarck, 1816: 564.

*Fromia milleporella* – Clark 1993: 332.

CURRENT STATUS. — *Fromia milleporella* (Lamarck, 1816).

MATERIAL EXAMINED. — South Seas • MNHN-IE-2014-57, MNHN-IE-2013-4376: 2 syntypes, Baudin expedition (1800-1804); Péron and Lesueur leg. • MHNH; Lesueur drawings collection; ref. 74016; Baudin expedition (1800-1804).

DISTRIBUTION. — The species commonly occurs in the tropical Indo-West Pacific. It is not present in European seas contrary to Lamarck's assumption.

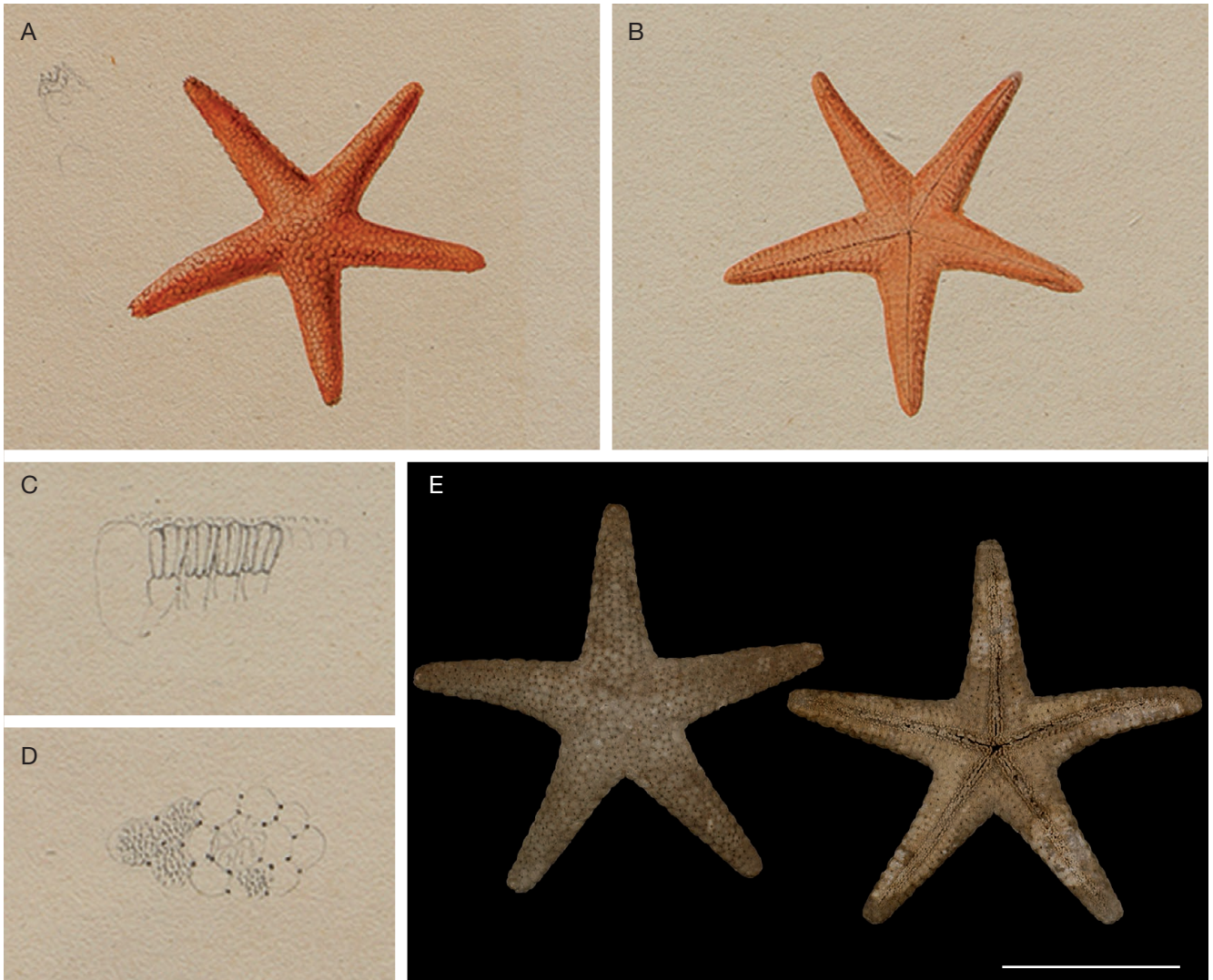


FIG. 20. — *Asterias milleporella* Lamarck, 1816: **A, B**, abactinal and actinal surfaces; **C**, furrow spines; **D**, madreporite and disc abactinal plates; **E**, syntype of the species (**A-D**, MHNH, Lesueur collection 74016, details, courtesy of MHNH; **E**, [MNHN-IE-2014-57](#)). Scale bar: 20 mm.

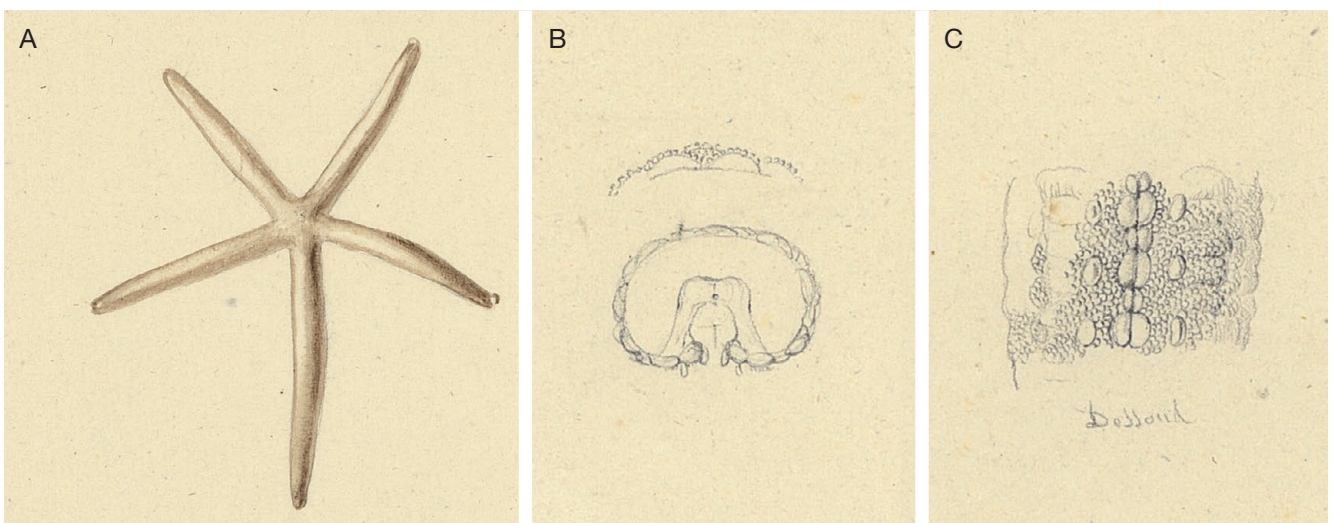


FIG. 21. — *Asterias multifora* Lamarck, 1816: **A**, abactinal surface; **B**, arm cross-section showing the arrangement of skeletal plates; **C**, adambulacral and actinolateral granules and plates (MHNH, Lesueur collection 74019, details, courtesy of MHNH).

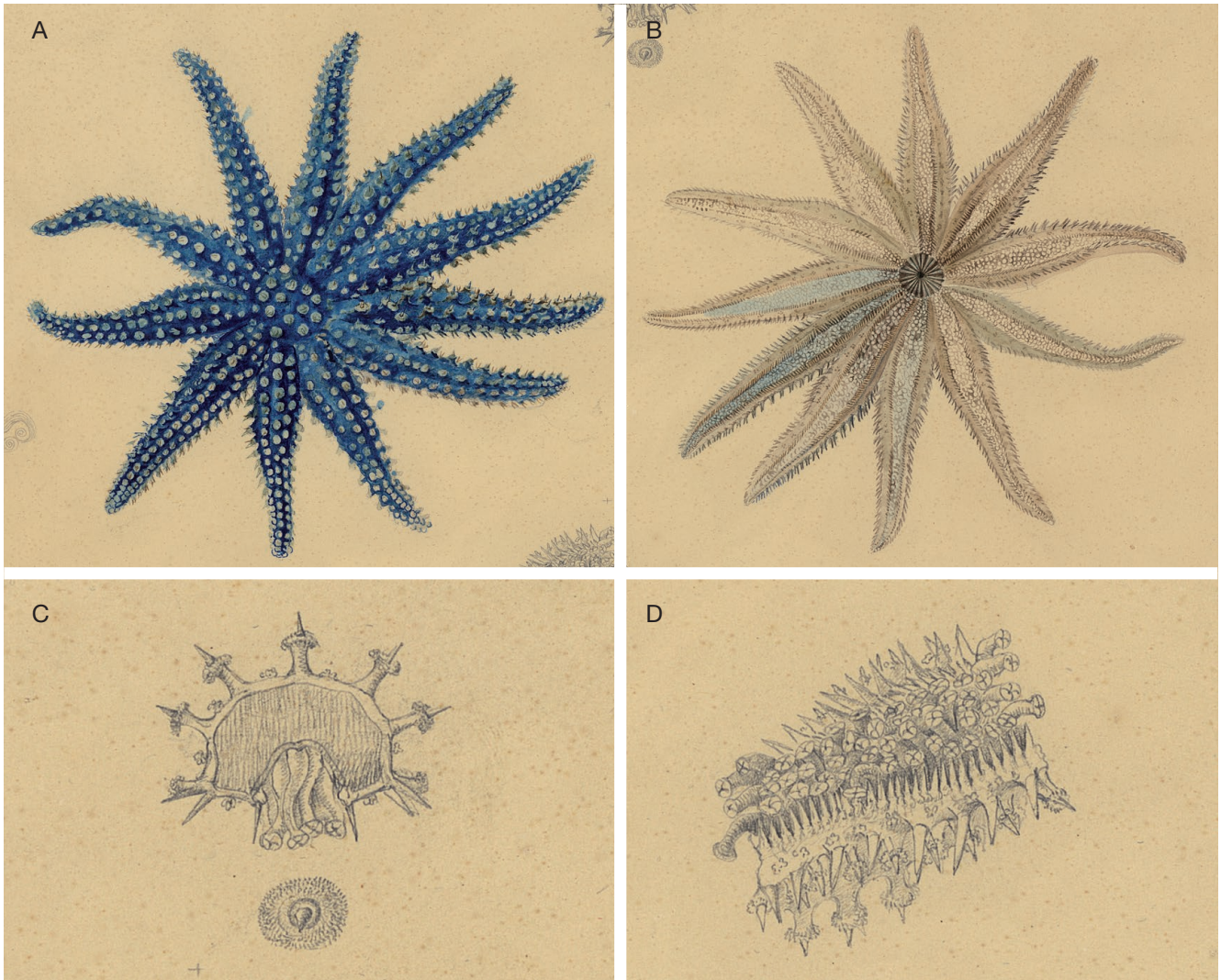


FIG. 22. — *Coscinasterias muricata* Verrill, 1867: **A, B**, abactinal (**A**) and actinal (**B**) surfaces; **C**, arm cross-section showing enlarged abactinal spines surrounded by rings of crossed pedicellariae, below: upper view of such a spine and ring; **D**, actinal side of an arm section showing tube feet and adambulacral and infero-marginal spines (MHNH, Lesueur collection 74036, details, courtesy of MHNH).

*multifora* Lamarck, 1816, *Asterias*  
(Fig. 21)

*Asterias multifora* Lamarck, 1816: 565.

*Linckia multifora* – Clark 1993: 339.

CURRENT STATUS. — *Linckia multifora* (Lamarck, 1816).

MATERIAL EXAMINED. — MHNH; Lesueur drawings collection; ref. 74019; Baudin expedition; Péron and Lesueur leg.

DISTRIBUTION. — The species commonly occurs in the whole Indo-West Pacific. It does not occur in European seas contrary to Lamarck's assumption.

REMARK

Lamarck's type material could not be found in MNHN.

*muricata* Verrill, 1867, *Coscinasterias*  
(Fig. 22)

*Coscinasterias muricata* Verrill, 1867: 249. — Clark in Clark & Mah 2001: 270.

CURRENT STATUS. — *Coscinasterias muricata* Verrill, 1867.

MATERIAL EXAMINED. — MHNH; Lesueur drawings collection; ref. 74036; Baudin expedition (1800-1804); Péron and Lesueur leg.

DISTRIBUTION. — Temperate Australia, Tasmania, New Zealand.

REMARK

Péron and Lesueur's material could not be found in the MNHN.

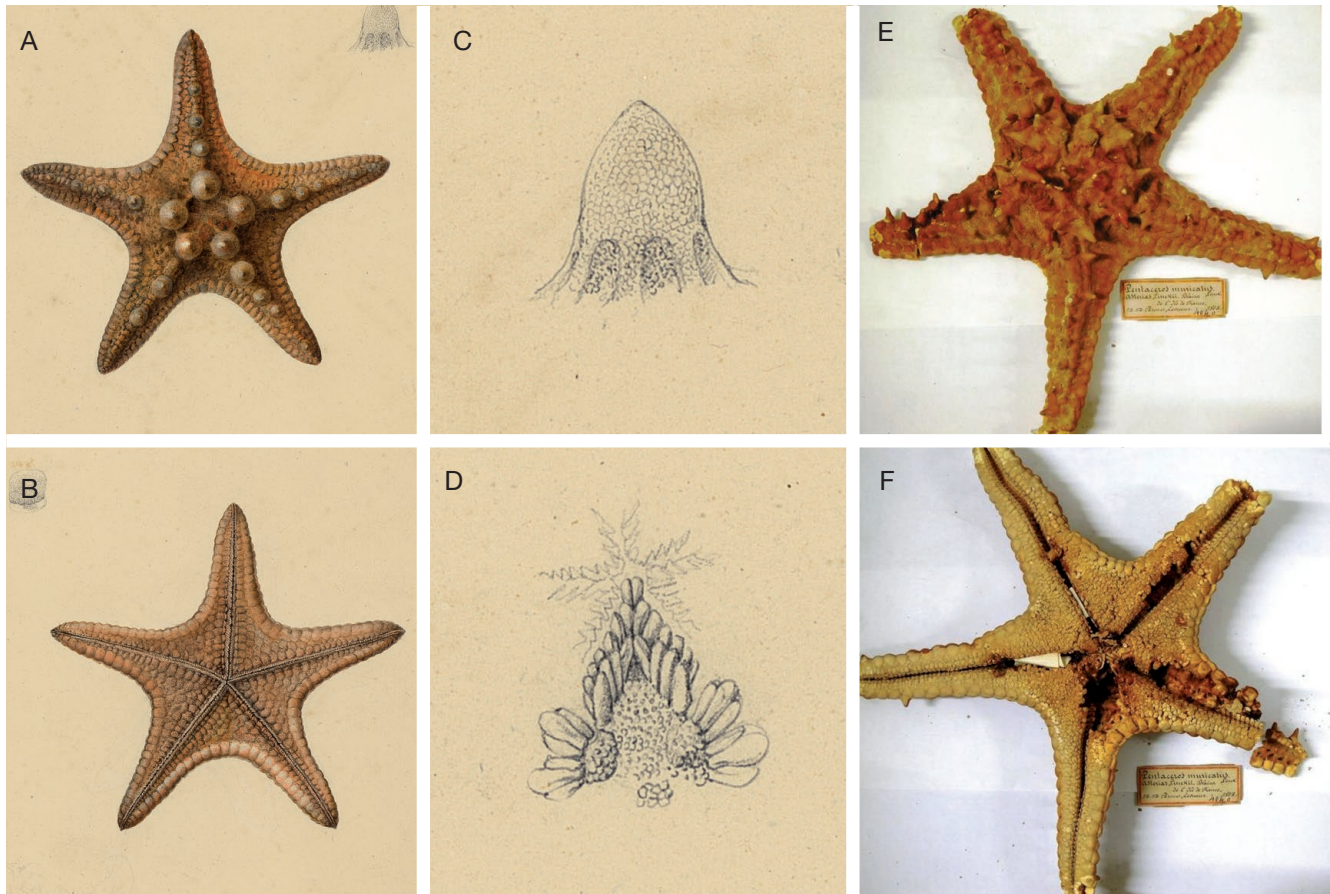


FIG. 23. — *Asterias nodosa* Lamarck, 1816, **A-D**, varieties 1 & 2: **A, B**, abactinal (**A**) and actinal (**B**) surfaces; **C**, enlarged abactinal tubercule, **D**, interradial arc (MHNH, Lesueur's collection 74055, details, courtesy of MHNH); **E, F**, variety 3: abactinal (**E**) and actinal (**F**) surfaces (MNHN-IE-2017-837).

*nodosa* Lamarck, 1816, *Asterias*  
(Fig. 22)

*Asterias nodosa* Lamarck, 1816: 557.

REMARK

Considering the MNHN collection and the works of Linck (1733) and Bruguière (1791), Lamarck cited three varieties of *Asterias nodosa* which in fact correspond to two different species.

*nodosa* var. 1 & 2 Lamarck, 1816, *Asterias*  
(Fig. 23)

*Asterias nodosa* Lamarck, 1816: 557.

*Asterias nodosa* Linnaeus, 1758 : 661.

*Protoreaster nodosus* - Clark 1993 : 318.

CURRENT STATUS. — *Protoreaster nodosus* (Linnaeus, 1758).

MATERIAL EXAMINED. — MHNH; Lesueur drawings collection; ref. 74055; Baudin expedition (1800-1804) ; Péron and Lesueur leg.

DISTRIBUTION. — Tropical East Indian ocean and tropical West Pacific.

*nodosa* var. 3 Lamarck, 1816, *Asterias*  
(Fig. 23E-F)

*Asterias nodosa* Lamarck, 1816 :557

REVISED STATUS. — *Asterias nodosa* var. 3 is newly synonymized here with *Protoreaster lincki* (Blainville, 1830).

MATERIAL EXAMINED. — Mauritius • MNHN-IE-2017-837; specimen from the Baudin expedition (1800-1804) ; Péron and Lesueur leg.

DISTRIBUTION. — Tropical West Indian ocean.

REMARK

*P. lincki* differs markedly from *P. nodosus* in having some of the distal supero-marginal plates bearing laterally-projecting spines. Also red and brown-beige are the dominant colours of abactinal and supero-marginal plates in *P. lincki* while they are of a varied brown in *P. nodosus*. Note also that *P. lincki* is very common in the west part of the Indian Ocean while *P. nodosus* is in the West Pacific.

*obtusangula* Lamarck, 1816, *Asterias*  
(Fig. 24)

*Asterias obtusangula* Lamarck, 1816: 556.



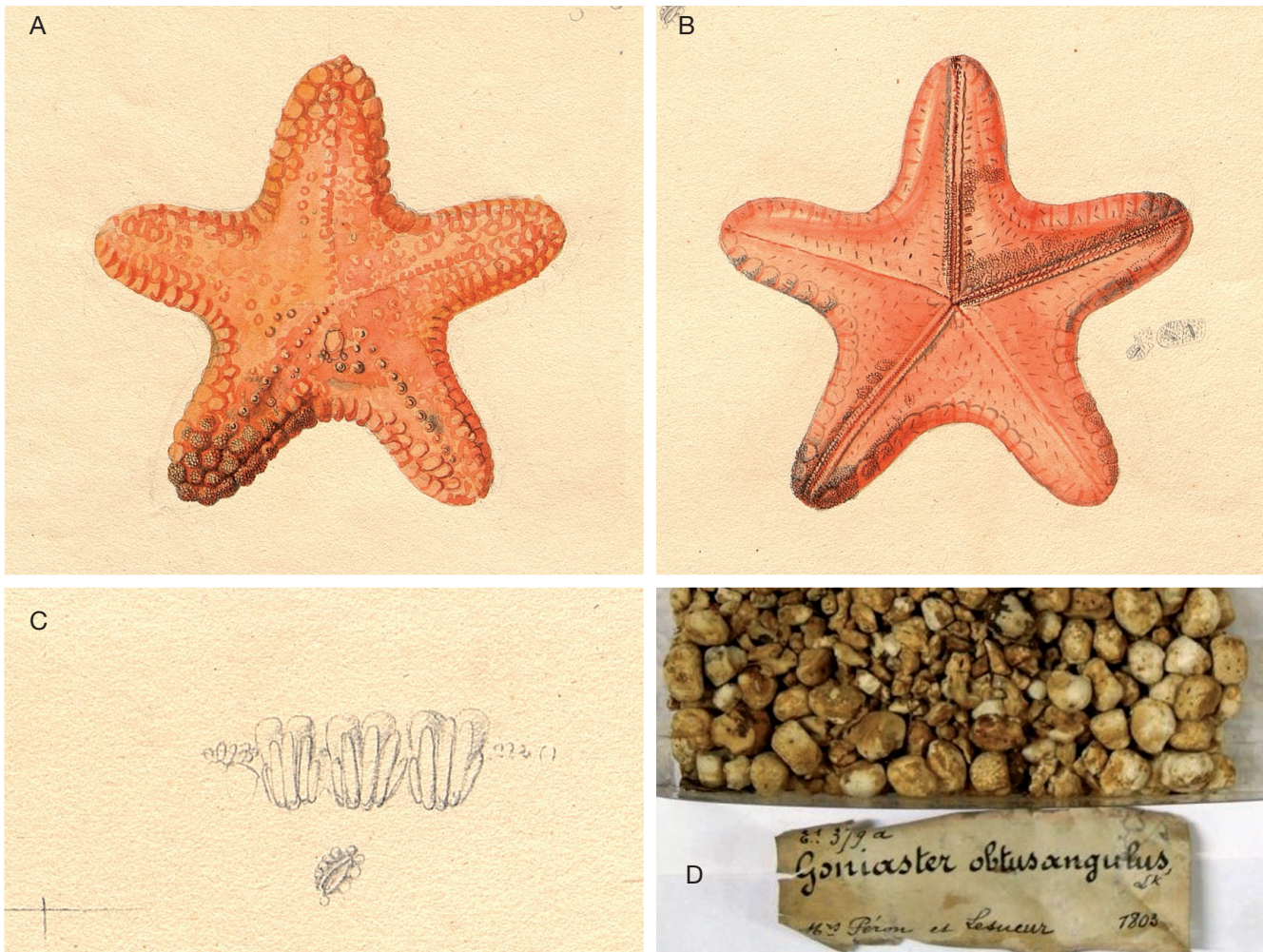


FIG. 24. — *Asterias obtusangula* Lamarck, 1816: **A, B**, abactinal (**A**) and actinal (**B**) surfaces; **C**, adambulacral spines and a sessile pedicellaria; **D**, remains of the holotype (**A-C**, MHNH, Lesueur collection 74051, details, courtesy of MHNH; **D**, MNHN-IE-2014-92).

*Pseudoreaster obtusangulus* – Clark 1993: 318.

CURRENT STATUS. — *Pseudoreaster obtusangulus* (Lamarck, 1816).

MATERIAL EXAMINED. — South Seas • MNHN-IE-2014-92; holotype (fragments); Baudin expedition (1800-1804); Péron and Lesueur leg. • MHNH; Lesueur drawings collection; ref. 74051; Baudin expedition.

DISTRIBUTION. — North-west Australia.

*ocellifera* Lamarck, 1816, *Asterias*  
(Fig. 25)

REMARK

To accommodate the Lamarckian species *Asterias ocellifera*, Gray (1840) established the genus *Nectria*. Yet Gray had not seen Lamarck's type specimens of *A. ocellifera*. When working on asteroids of the genus *Nectria* housed in the British Museum, Perrier (1875) realised that the species *N. ocellifera sensu* Gray was different from the species described by Lamarck while sharing some similarities with the second Paris specimen also identified as *A. ocellifera* by Lamarck. He consequently proposed the new name *Nectria ocellata* for Gray's specimens and gave a

precise description of one of the Gray's individuals that will be considered later as the lectotype of the species (Zeidler & Rowe 1986). As a consequence, the second specimen of Lamarck, while collected by Péron and Lesueur and being representative of the Perrier's species, is not a type of *Nectria ocellata* Perrier, 1875.

*Asterias ocellifera* Lamarck, 1816: 553 (part).

*Nectria ocellifera* – Clark 1993: 305.

CURRENT STATUS. — *Nectria ocellifera* (Lamarck, 1816).

MATERIAL EXAMINED. — South Seas • MNHN-IE-2014-24; holotype; Baudin expedition (1800-1804); Péron and Lesueur leg. • MHNH; Lesueur drawings collection; ref. 74020 and 74050; Baudin expedition.

DISTRIBUTION. — *N. ocellifera* is restricted to the south part of West Australia.

*ocellata* Perrier, 1875, *Nectria*  
(Fig. 26)

*Asterias ocellifera* (part) Lamarck, 1816: 553.

*Nectria ocellata* Perrier, 1875: 188. — Clark 1993: 305.

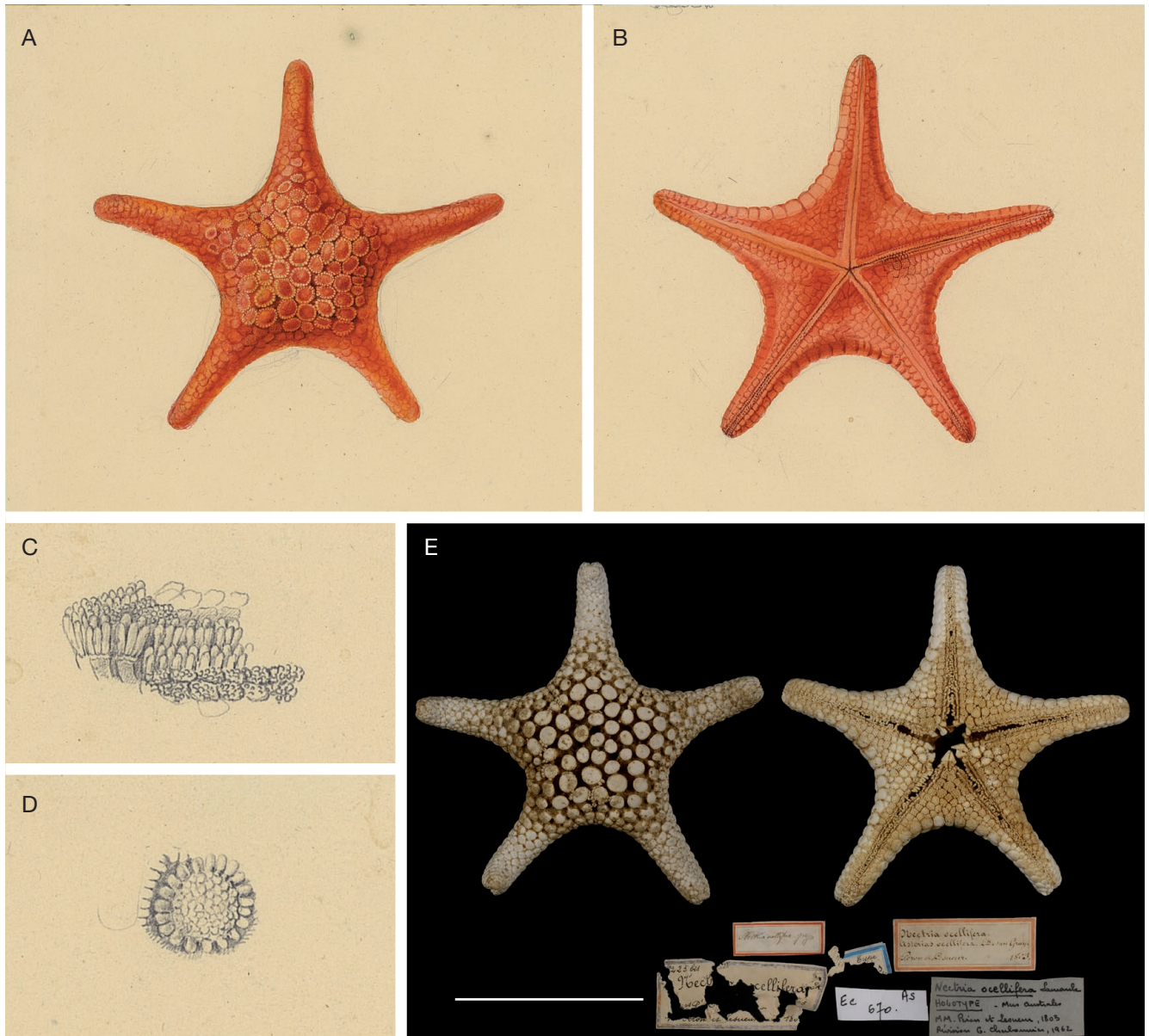


FIG. 25. — *Asterias ocellifera* Lamarck, 1816: **A**, abactinal (**A**) and actinal (**B**) surfaces; **C**, interradial arc and adambulacral spines; **D**, abactinal tabula showing the scale-like peripheral granules; **E**, holotype of *Asterias ocellifera* (**A-D**, MHNH, Lesueur collection 74050, details, courtesy of MHNH; **E**, MNHN-IE-2014-24). Scale bar: 50 mm.

MATERIAL EXAMINED. — South Seas • MNHN-IE-2014-23; Baudin expedition (1800-1804); Péron and Lesueur leg.; syntype of *Asterias ocellifera* Lamarck, 1816.

DISTRIBUTION. — *N. ocellata* is mainly distributed along the coasts of South Australia, Victoria and New South Wales, and around Tasmania.

*ophidiana* Lamarck, 1816, *Asterias*  
(Fig. 27)

*Asterias ophidiana* Lamarck, 1816: 567.

*Ophidiaster ophidianus* – Clark & Downey 1992: 281.

CURRENT STATUS. — *Ophidiaster ophidianus* (Lamarck, 1816).

DISTRIBUTION. — From western Mediterranean to the Gulf of Guinea.

REMARK

Lamarck' type material could not be found in the MNHN.

*penicillaris* Lamarck, 1816, *Asterias*  
(Fig. 28)

*Asterias penicillaris* Lamarck, 1816: 555.

*Asterinopsis penicillaris* – Clark 1993: 215.

CURRENT STATUS. — *Asterinopsis penicillaris* (Lamarck, 1816).

MATERIAL EXAMINED. — MHNH; Lesueur drawings collection; ref. 74007; Baudin expedition; Péron and Lesueur leg.

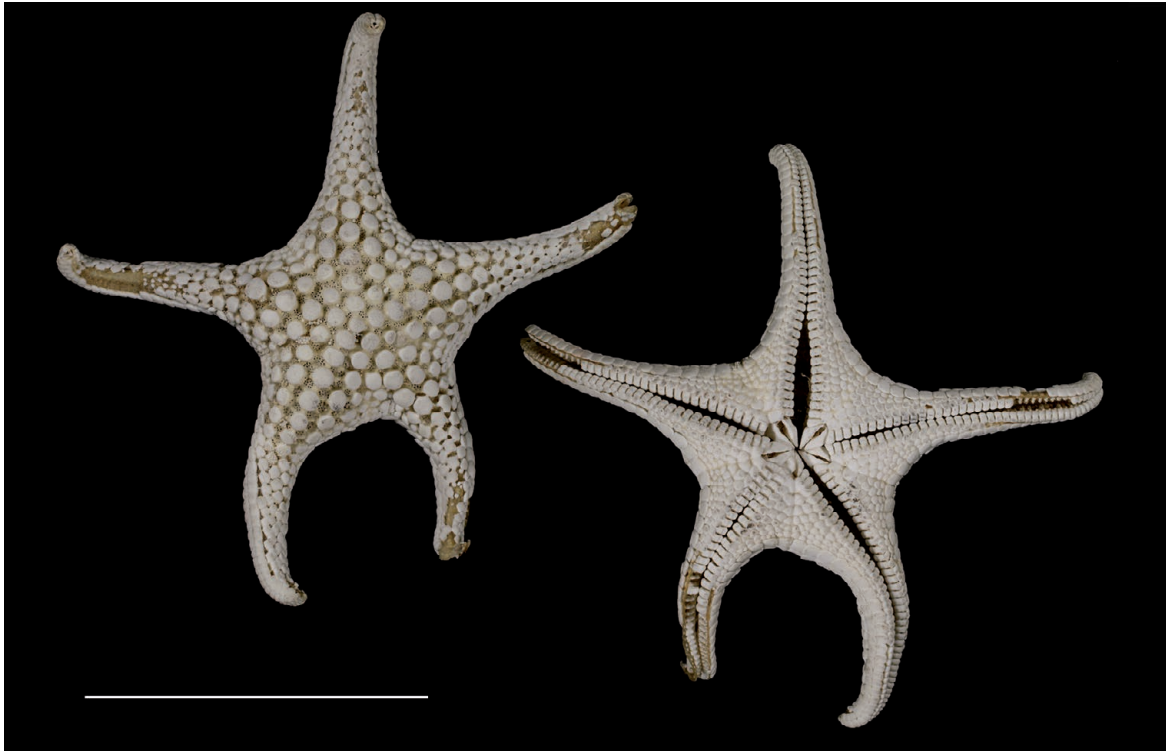


FIG. 26. — *Nectria ocellata* Perrier, 1875 [non *Asterias ocellifera* Lamarck, 1816]. Individual collected by Péron and Lesueur. Scale bar: 50 mm.

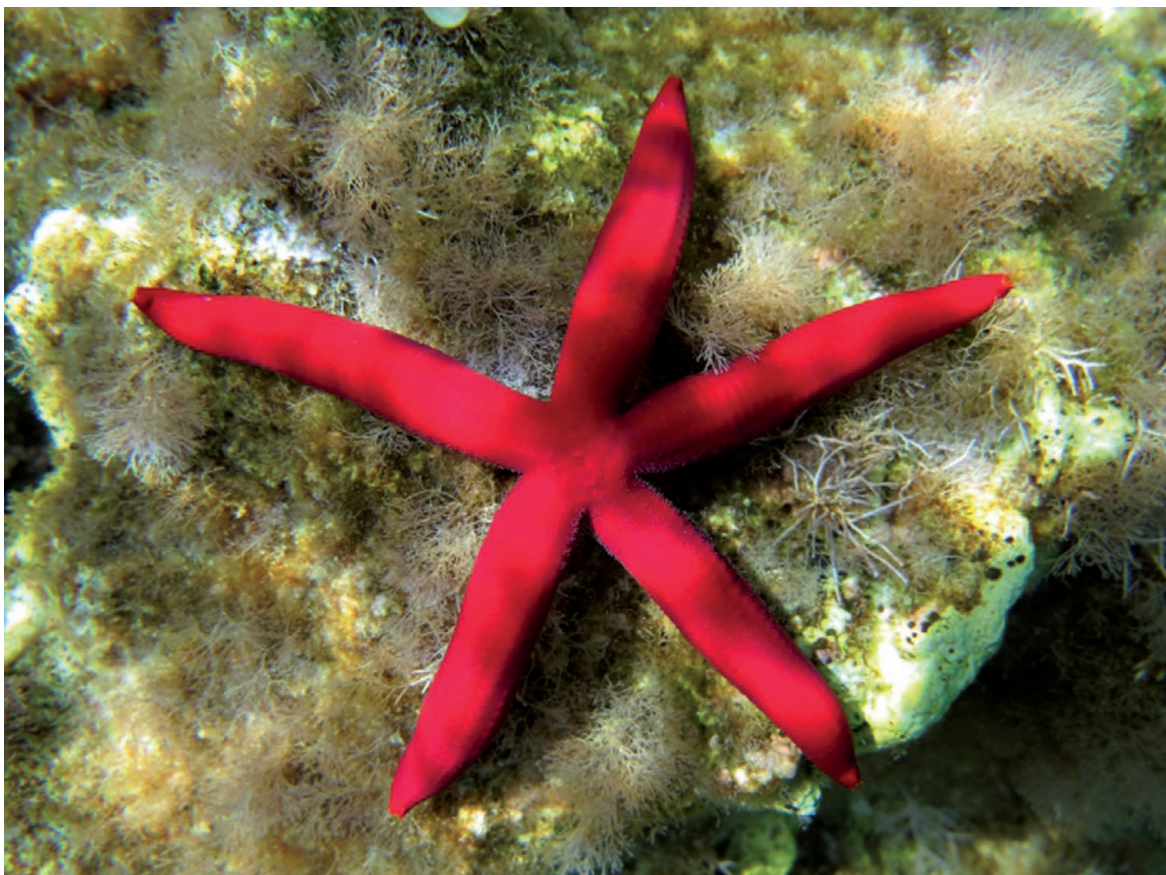


FIG. 27. — *Asterias ophidiana* Lamarck, 1816 (Worms image. Photo by Roberto Pilon).

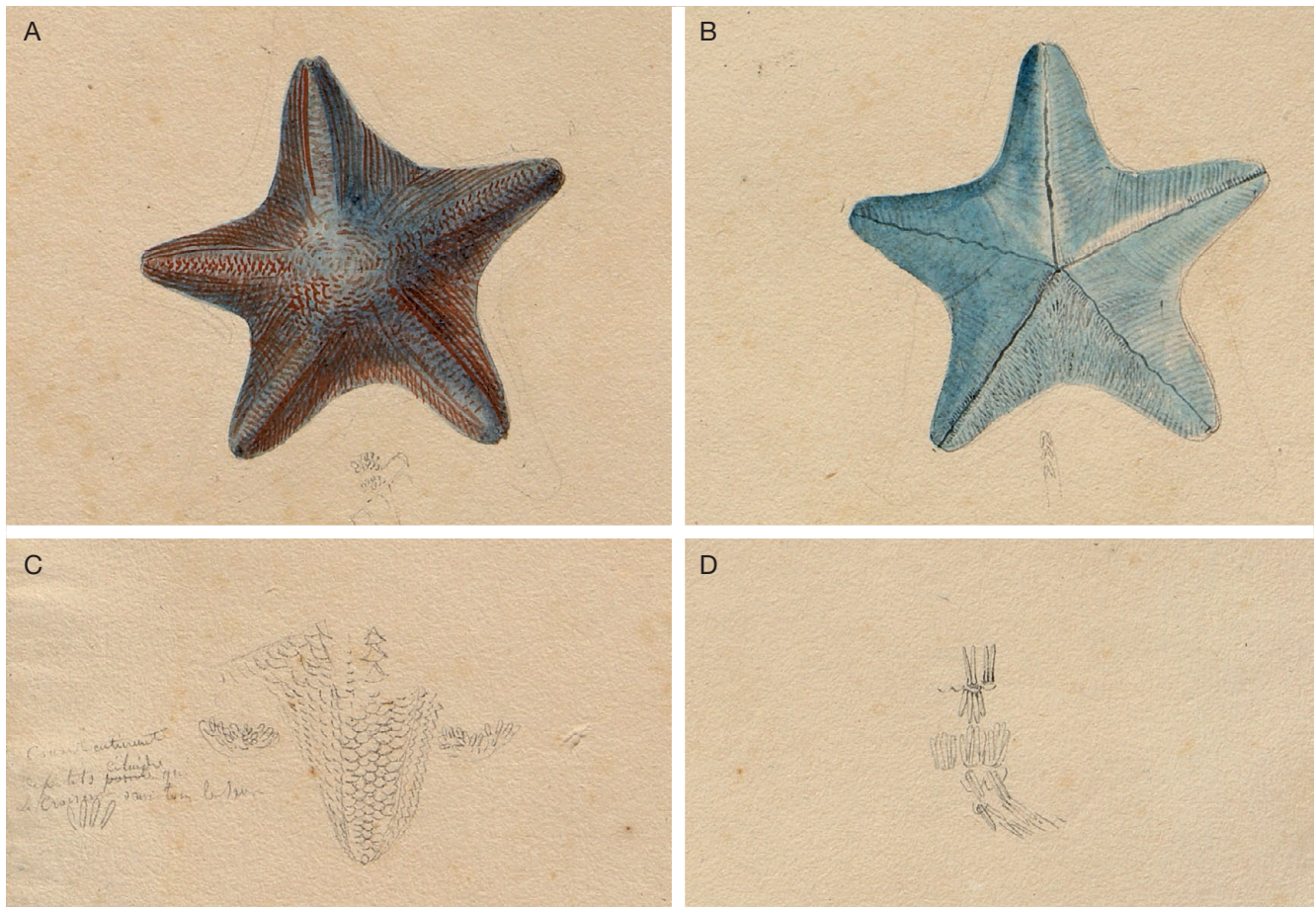


FIG. 28. — *Asterias penicillaris* Lamarck, 1816: **A, B**, abactinal (**A**) and actinal (**B**) surfaces; **C**, arrangement of arm abactinal plates (text “wholly covered by small cylinders intersecting in all directions”); **D**, adambulacral and actinolateral spines (MNH, Lesueur collection 74007, details, courtesy of MNH).

REMARK

Collected during the Baudin expedition by Péron and Lesueur, *Asterias penicillaris* cannot consequently come from the Atlantic, as written by Lamarck (1816). The species was discussed by Müller & Troschel (1842), under the name *Asteriscus penicillaris* who reported its colouration from Lesueur’s drawings: “oben mit bläulichen Grunde und rothbraunen Stacheln ; unten blau [above, bluish background with brownish-red spines; below blue]”. These authors mentioned that the species is in the Berlin Museum and said nothing about its presence in Paris. The absence of individuals in Paris could explain why Perrier (1875) did not comment on the species.

The Péron and Lesueur’s material of the species could not be found in the MNHN.

*pentagonula* Lamarck, 1816, *Asterias*  
(Fig. 29)

*Asterias pentagonula* Lamarck, 1816: 554.

*Anthenea pentagonula* – Clark 1993: 296.

CURRENT STATUS. — *Asterias pentagonula* is newly synonymized here with *Tosia australis* Gray, 1840.

MATERIAL EXAMINED. — MNH; Lesueur drawings collection; ref. 74021; Baudin expedition; Péron and Lesueur leg.

DISTRIBUTION. — South of Australia and Tasmania.

REMARKS

*Asterias pentagonula* was often said to belong to the genus *Anthenea* which includes asteroids with an enlarged disc and relatively short though well-individualised arms. However, Lamarck’s description emphasises the peculiar shape of the species as “Aplati, presque discoïde, avec des angles courts [flat, almost disc-shaped, with shallow angles]”. Such an appearance does not fit with *Anthenea* and rather suggests that the species belongs to the genus *Tosia* Gray, 1840, a suggestion that is consistent with both its origin (South Seas) and collectors (Péron and Lesueur). Several authors consider that *Asterias pentagonula* is a Chinese species. This is unlikely and could result from the synonymy of *A. pentagonula* with *Anthenea chinensis* Gray, 1840 in Müller & Troschel (1842: 57). This is a rather strange proposal as Gray’s species originated from the China-Japan area while *Asterias pentagonula* came from the South Seas. Liao & Clark (1995: 99) consider that these species are two different taxa. The MNHN specimens identified *Anthenea pentagonula* belong to the species *Anthenea australiae* Döderlein, 1915; see previously under that species.

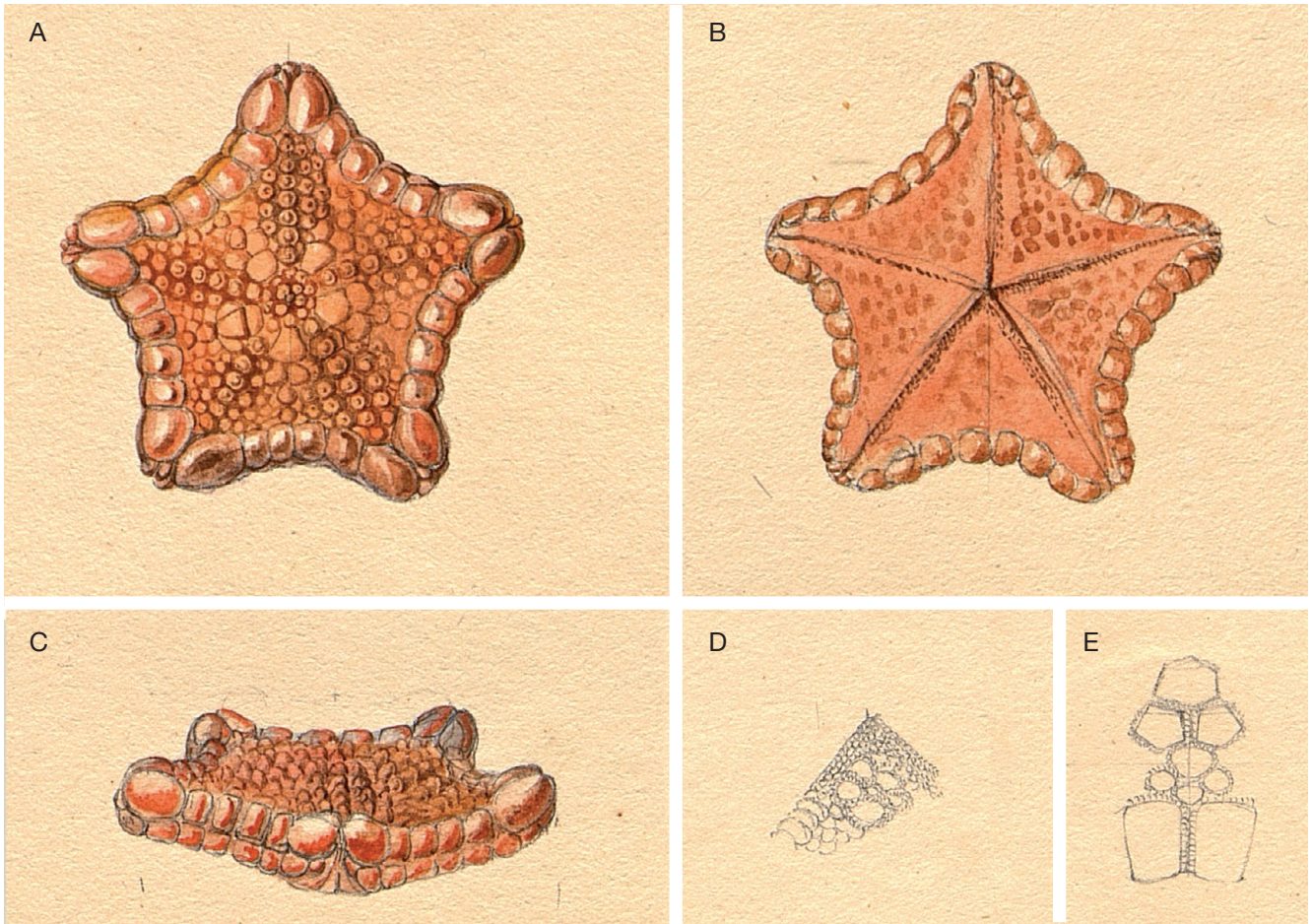


FIG. 29. — *Asturias pentagonula* Lamarck, 1816: **A, B**, abactinal (**A**) and actinal (**B**) surfaces; **C**, profile view; **E**, interradial arc; **F**, superomarginal and abactinal plates (MHNH, Lesueur collection 74021, details, courtesy of MHNH).

*pleyadella* Lamarck, 1816, *Asterias*  
(Fig. 30)

*Asterias pleyadella* Lamarck, 1816: 553.

*Goniodiscaster pleyadella* – Clark 1993: 301.

CURRENT STATUS. — *Asterias pleyadella* is newly synonymized here with *Protoreaster* sp. (juvenile).

MATERIAL EXAMINED. — South Seas • MNHN-IE-2014-124: 2 syntypes; Baudin expedition (1800-1804); Péron and Lesueur leg. • MHNH; Lesueur drawings collection; ref. 74030; Baudin expedition.

DISTRIBUTION. — *Protoreaster* species commonly occur throughout the Indo-West Pacific.

REMARK

When discussing *Asterias pleyadella* status, Perrier (1875: 275) suggested that its representatives are juveniles closer to oreasterids than to goniasterids. He consequently related *A. pleyadella* to the genus *Pentaceros* Gray, 1840. This makes sense, indeed, considering the overall shape of the individuals, their carinate arms and, particularly, the five radially positioned tubercles surrounding the central part of the disc.

I agree with Perrier's analysis but consider *Asterias pleyadella* a juvenile *Protoreaster*, the common oreasterid genus of the Indian Ocean. Lesueur drew (pencil drawings) the best preserved individual of *A. pleyadella*.

*punctata* Lamarck, 1816, *Asterias*  
(Fig. 31)

*Asterias punctata* Lamarck, 1816: 553.

*Petricia punctata* – Clark 1993: 321.

CURRENT STATUS. — *Asterias punctata* is newly newly synonymized here with *Asteropsis carinifera* (Lamarck, 1816).

MATERIAL EXAMINED. — South Seas • MNHN-IE-2014-31; 2 syntypes of *Asterias carinifera*; Baudin expedition (1800-1804); Péron and Lesueur leg. • MHNH; Lesueur drawings collection; ref. 74043; Baudin expedition.

REMARKS

There is a strange confusion between Lamarck's *Asterias punctata* and Lamarck's *Asterias vernicina*, the two species being erroneously considered synonymous. This confusion presumably arose



FIG. 30. — *Asterias pleyadella* Lamarck, 1816: **A**, syntypes of the species; **B**, **C**, pencil drawings of abactinal surface and profile of the intact specimen (**A**, MNHN-IE-2014-124; **B**, **C**, MNHN, Lesueur collection 74030, details, courtesy of MNHN).

from Perrier's stay in the British Museum in the early 1870s. After having compared London and Paris asteroid specimens, he proposed, with reason, to synonymise Lamarck's *Asterias vernicina* and Gray's *Petricia punctata*, which he confirmed in his 1875 revision, combining the two species under the name *Petricia vernicina*. Of course, this did not imply that Lamarck's *Asterias punctata* was also a synonym of Lamarck's *Asterias vernicina*, a synonymy which was, however, tacitly accepted by subsequent authors. The situation became still more confused as neither Müller & Troschel (1842) nor Perrier (1875) discussed Lamarck's *Asterias punctata*. They found no trace of *A. punctata* individuals in the MNHN which would mean the specimens have been lost for quite a long time.

Lamarck's Latin diagnosis of *Asterias punctata* is as follows: "pentagona, inermis, utrinque tessellata; tesselis dorsi sinuato-angulatis, punctatis; margine articulato [pentagonal, spineless [and] checked on both sides; upper side perforate with rounded tiles; articulated arm". Nota: "Tiles" refer to abactinal plates and 'perforate' to papulae.] Both this diagnosis and the MNHN pictures of *Asteropsis carinifera* syntypes are clearly reminiscent of the shape of juveniles *Asteropsis carinifera* already illustrated by Lorient (1885: 67, pl 20 figs 7-10). One may therefore conclude that *A. punctata* and *A. carinifera* are synonyms, the former corresponding to the juvenile form of the species.

*purpureus* Perrier, 1869, *Ophidiaster*  
(Fig. 32)

*Ophidiaster purpureus* Perrier, 1869: 61; 1875: 127.

*Ophidiaster hemprichi* – Clark 1993: 349.

CURRENT STATUS. — *Ophidiaster hemprichi* (Müller & Troschel, 1842).

MATERIAL EXAMINED. — Seychelles • MNHN-IE-2014-404; holotype; Rousseau leg.; 1842.

DISTRIBUTION. — The species is rather common in the tropical Indo-West-Pacific.

REMARK

Perrier (1875: 127) established the species *O. purpureus* to accommodate one of the two specimens that Lamarck identified as a representative of his new species *Asterias cylindrica*, (*O. purpureus* is now considered a synonym of *Ophidiaster hemprichi* (Müller & Troschel, 1842)). Yet Perrier did not consider the second Lamarck specimen of *Asterias cylindrica* to designate the holotype of *O. purpureus*. He assigned as holotype an individual collected by Rousseau in the Seychelles in 1842.

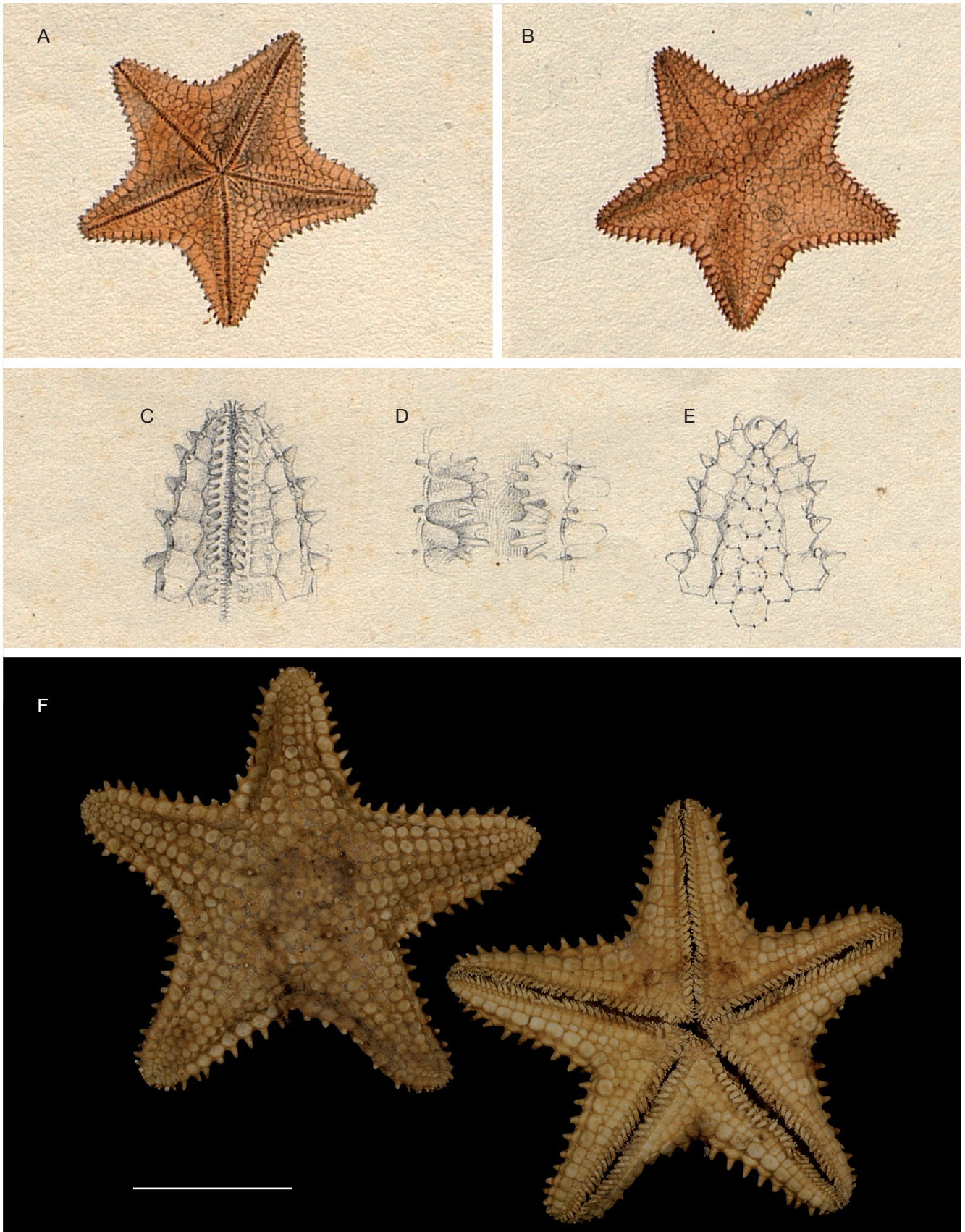


FIG. 31. — *Asterias punctata* Lamarck, 1816: **A, B**, abactinal and actinal surfaces; **C, E**, abactinal and actinal sides of the arm tip; **D**, furrow and subambulacral spines; **F**, syntypes of the species [MNHN-IE-2014-31](#) (**A-E**: MHNH, Lesueur collection 74043, details, courtesy of MHNH).



Fig. 32. — *Ophidiaster purpureus* Perrier, 1869 abactinal and actinal surfaces of the holotype (MNHN-IE-2014-404).

*rosacea* var. *lobis quindenis* Lamarck, 1816, *Asterias*  
(Fig. 33)

*Asterias rosacea* Lamarck, 1816: 558.

*Anseropoda rosacea* – Clark 1993: 206.

CURRENT STATUS. — *Anseropoda rosacea* (Lamarck, 1816).

MATERIAL EXAMINED. — MNHN-IE-2014-62; holotype; Baudin expedition (1800-1804); Péron and Lesueur leg. • MHNH; Lesueur drawings collection; ref. 7435; Baudin expedition.

DISTRIBUTION. — West, north and north-east Australia, Indonesia, tropical West Pacific.

REMARK

Lamarck (1816) gave no type locality for the species.

*rosacea* var. *lobis senis* Lamarck, 1816, *Asterias*  
(Fig. 34)

*Asterias rosacea* Lamarck, 1816: 558.

*Anseropoda rosacea* – Clark 1993: 206.

CURRENT STATUS. — *Anseropoda* sp.

MATERIAL EXAMINED. — MHNH; Lesueur drawings collection; ref. 74001; Baudin expedition; Péron and Lesueur leg.

REMARK

Lamarck's variety *lobis senis* corresponds to a still unidentified six-armed species of *Anseropoda* Nardo, 1834. Lamarck gave no locality for the species. Lamarck's material of *Asterias rosacea* var. *lobis senis* could not be found in the MNHN.



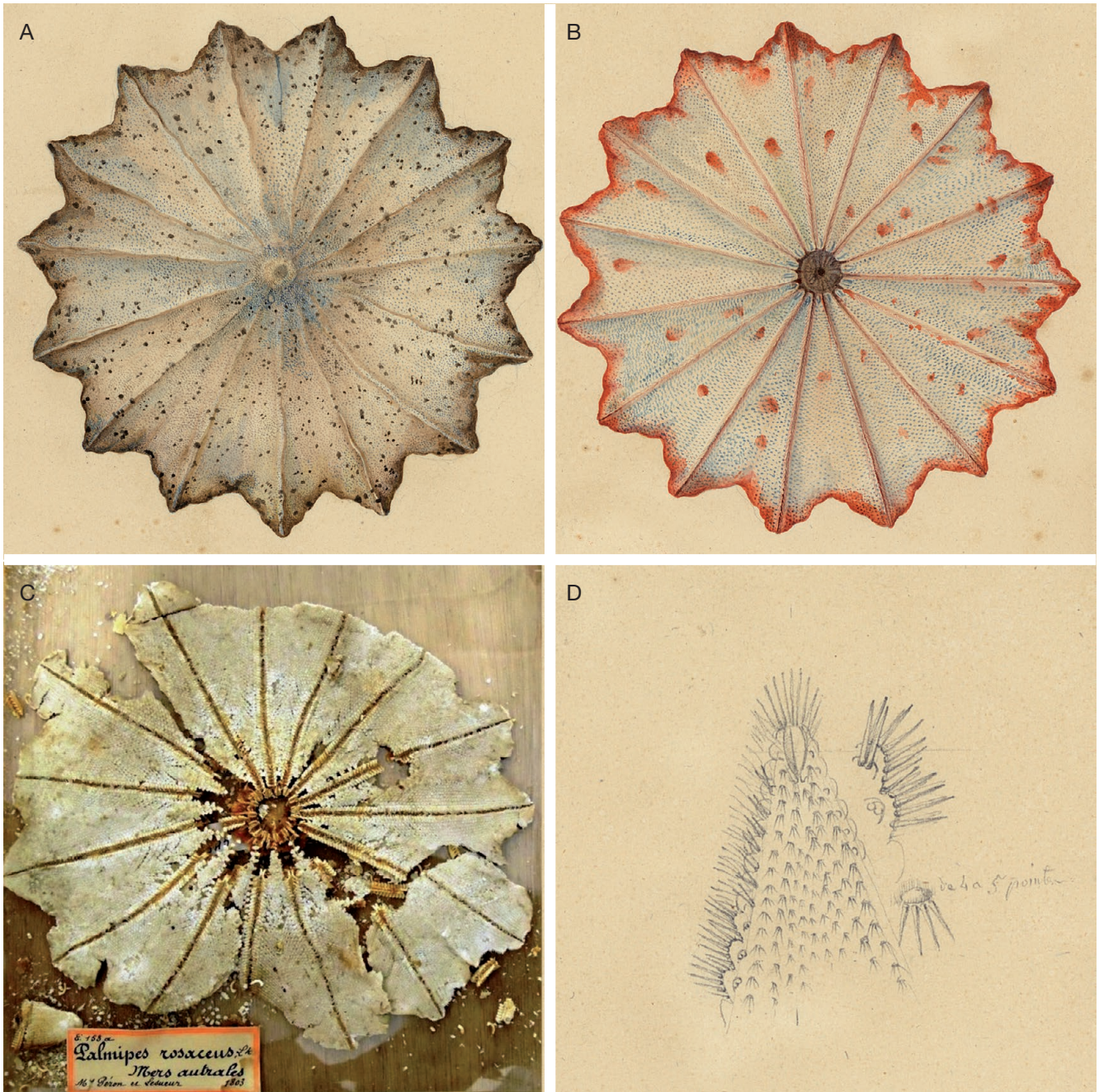


FIG. 33. — *Asterias rosacea* var. *lobis quindenis* Lamarck, 1816: **A**, **B**, abactinal (**A**) and actinal (**B**) surfaces; **C**, holotype of *A. rosacea* (actinal view); **D**, interradial arc and adambulacral spines (text: “from 4 to 5 spikes”); (**A**, **B**, **D**, MHNH, Lesueur collection 74035, details, courtesy of MHNH; **C**, MNHN-IE-2014-62).

*senegalensis* Lamarck, 1816, *Asterias*  
(Fig. 35)

*Asterias senegalensis* Lamarck, 1816: 567.

*Luidia senegalensis* – Clark & Downey 1992: 21.

CURRENT STATUS. — *Luidia senegalensis* (Lamarck, 1816).

MATERIAL EXAMINED. — Senegal • MNHN-IE-2014-160; 2 syntypes; Adanson leg.

DISTRIBUTION. — Florida to south of Brazil.

REMARK

Except for its two syntypes, the species *Luidia senegalensis* was never reported from African coasts. The type locality could be wrong, as it is the case for several localities given by Adanson (see Madsen 1950: 205) and the syntypes most probably come from the West Indies. In fact, *L. senegalensis* is a shallow water species from western Atlantic. Note that the MNHN has a third specimen of *L. senegalensis*, also collected by Adanson. It belonged to the Michelin collection and was presumably not seen by Lamarck.

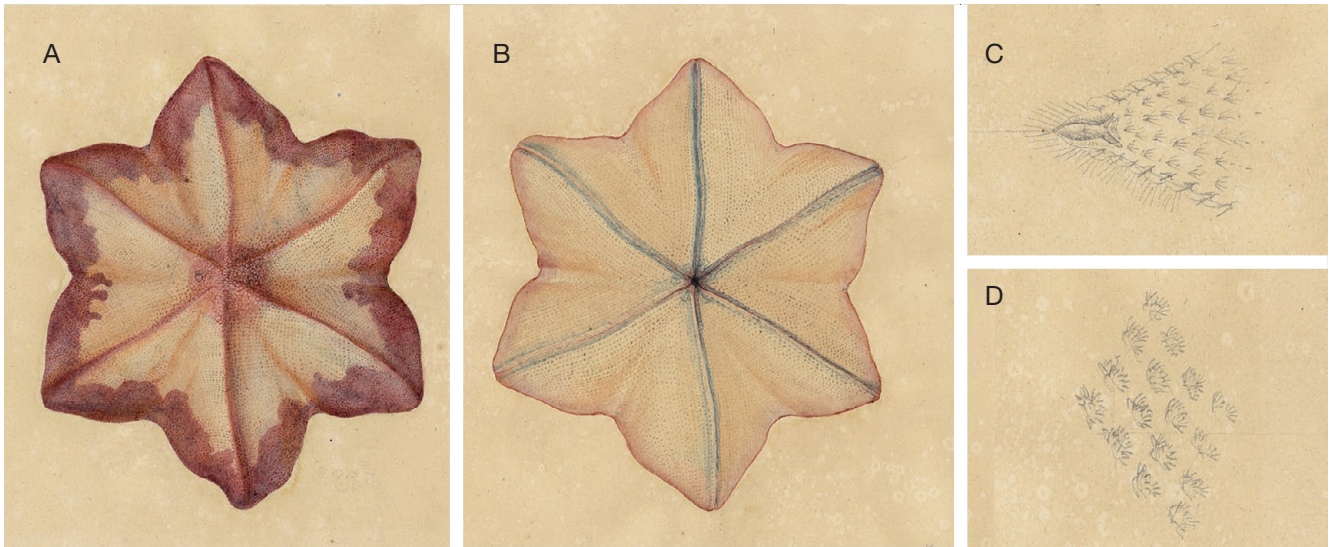


FIG. 34. — *Asterias rosacea* var. *lobisensis* Lamarck, 1816: **A**, **B**, abactinal (**A**) and actinal (**B**) surfaces; **C**, interradial arc; **D**, arrangement of abactinal spines (MHNH, Lesueur collection 74001, details, courtesy of MHNH).

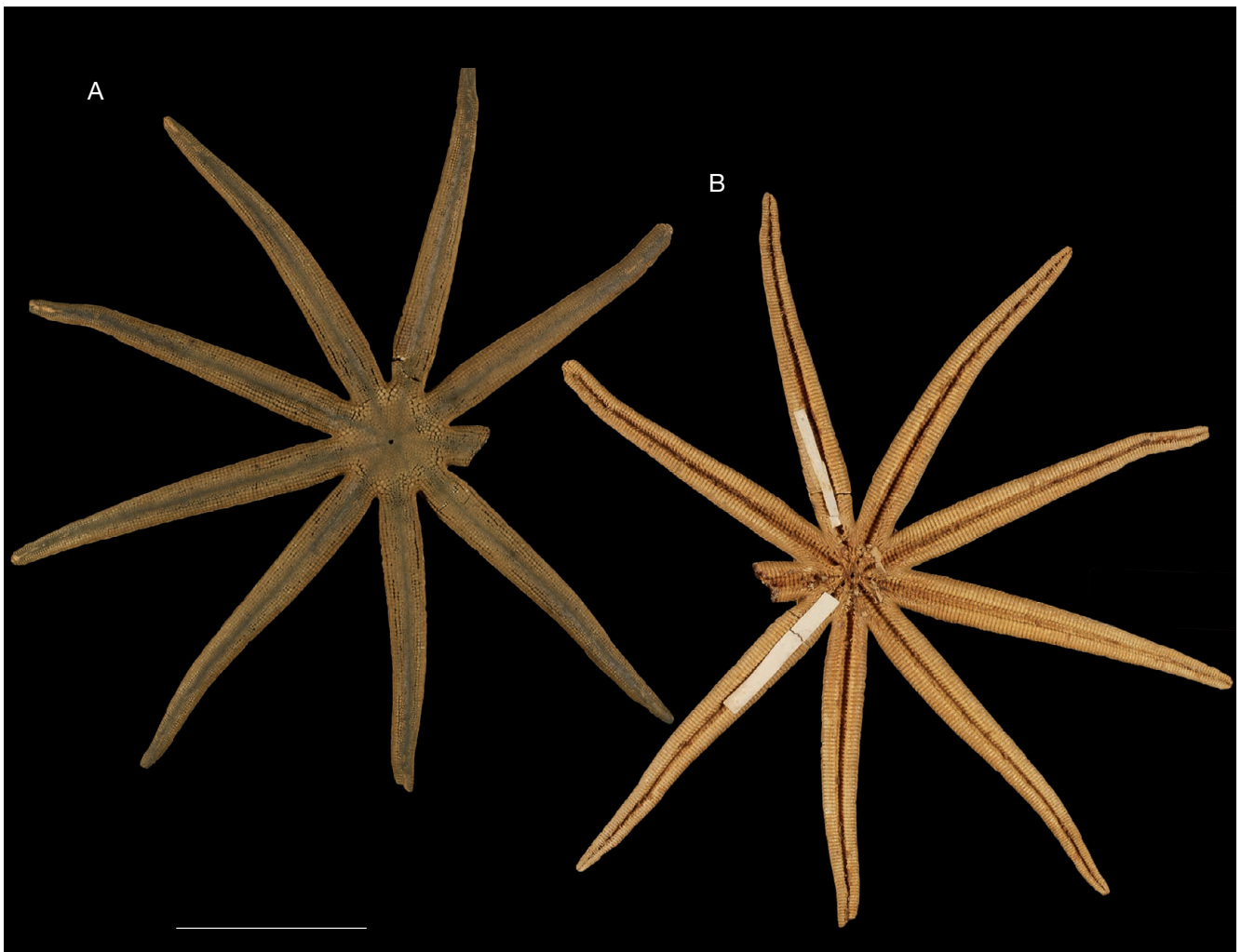


FIG. 35. — *Asterias senegalensis* Lamarck, 1816: abactinal (**A**) and actinal (**B**) surfaces of a syntype (MNHN-IE-2014-160).

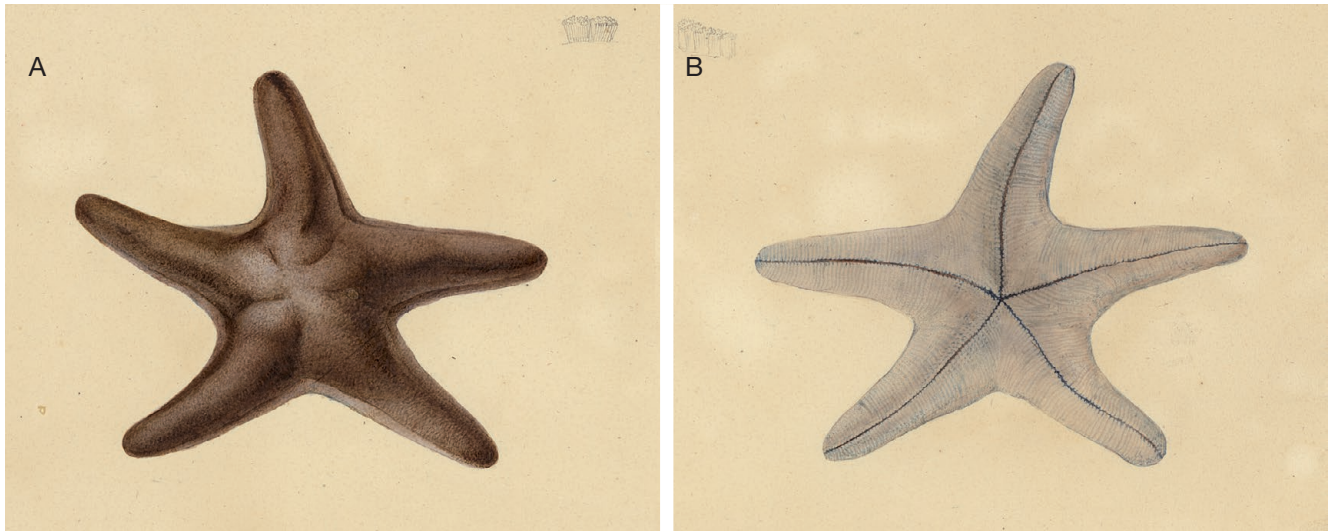


FIG. 36. — *Asteriscus setaceus* Müller & Troschel, 1842: **A**, **B**, abactinal (**A**) and (**B**) actinal surfaces (MHNH, Lesueur collection 74024, details, courtesy of MHNH).

*setaceus* Müller & Troschel, 1842, *Asteriscus*  
(Fig. 36)

*Asteriscus setaceus* Müller & Troschel, 1842: 43.

*Asterina setacea* – Clark 1993: 213.

CURRENT STATUS. — *Asteriscus setaceus* is newly synonymized here with *Paranepanthia grandis* (H. L. Clark, 1928).

MATERIAL EXAMINED. — MNHN-IE-2014-638; holotype; Baudin expedition (1800-1804); Péron and Lesueur leg. • MHNH; Lesueur drawing collection 74024; Baudin expedition.

DISTRIBUTION. — South coast of Australia, Tasmania

REMARK

According to a note by Lesueur, the edges of abactinal surface of the individual are whitish. The holotype is altered and the drawings lack details. The species is tentatively identified here *Paranepanthia grandis* due to its shape with flat edge and to the oblique orientation of the actinal plates and armament (see also the website *Atlas of living Australia* <https://www.ala.org.au/>, species *Paranepanthia grandis* (H.L. Clark, 1928)).

*striata* Lamarck, 1816, *Asterias*  
(Fig. 37)

*Asterias striata* Lamarck, 1816: 564.

*Valvaster striatus* – Clark 1993: 322.

CURRENT STATUS. — *Valvaster striatus* (Lamarck, 1816).

MATERIAL EXAMINED. — Mauritius • MNHN-IE-2014-36; holotype; Mathieu leg.; 1812.

*subulata* Lamarck, 1816, *Asterias*  
(Fig. 38)

*Asterias subulata* Lamarck, 1816: 568.

*Chaetaster longipes* – Clark 1993: 189.

CURRENT STATUS. — *Chaetaster longipes* (Bruzellius, 1805).

DISTRIBUTION. — Mediterranean and East Atlantic (from Portugal to Liberia).

REMARK

Lamarck gave no information on the origin of *Asterias subulata* specimen though its description strongly supports the synonymy with the species *Chaetaster longipes*. Lamarck's type material of *Asterias subulata* could not be found in the MNHN.

*subulata* Gray, 1840, *Metrodira*  
(Fig. 39)

*Metrodira subulata* Gray, 1840: 280. — Clark 1996: 243.

CURRENT STATUS. — *Metrodira subulata* Gray, 1840.

MATERIAL EXAMINED. — MHNH; Lesueur drawings collection; ref. 74017; Baudin expedition; Péron and Lesueur leg.

DISTRIBUTION. — North part of Australia, Gulf of Bengal, Indonesia, Philippines.

REMARK

Péron and Lesueur's material of the species could not be found in the MNHN.

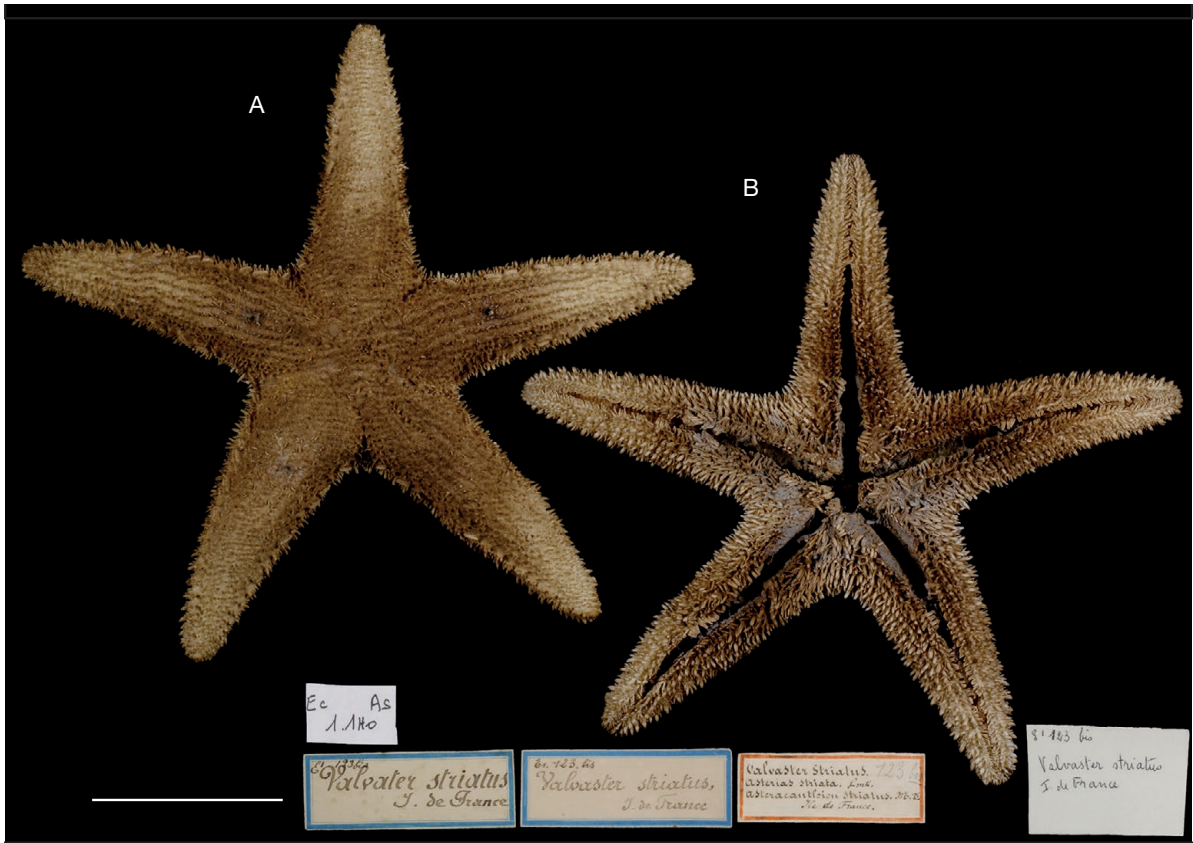


FIG. 37. — *Asterias striata* Lamarck, 1816: abactinal (A) and actinal (B) surfaces of the holotype (MNHN-IE-2014-36).



FIG. 38. — *Chaetaster longipes* Lamarck, 1816: abactinal and actinal surfaces of a specimen of the MNHN (MNHN-IE-2014-541).

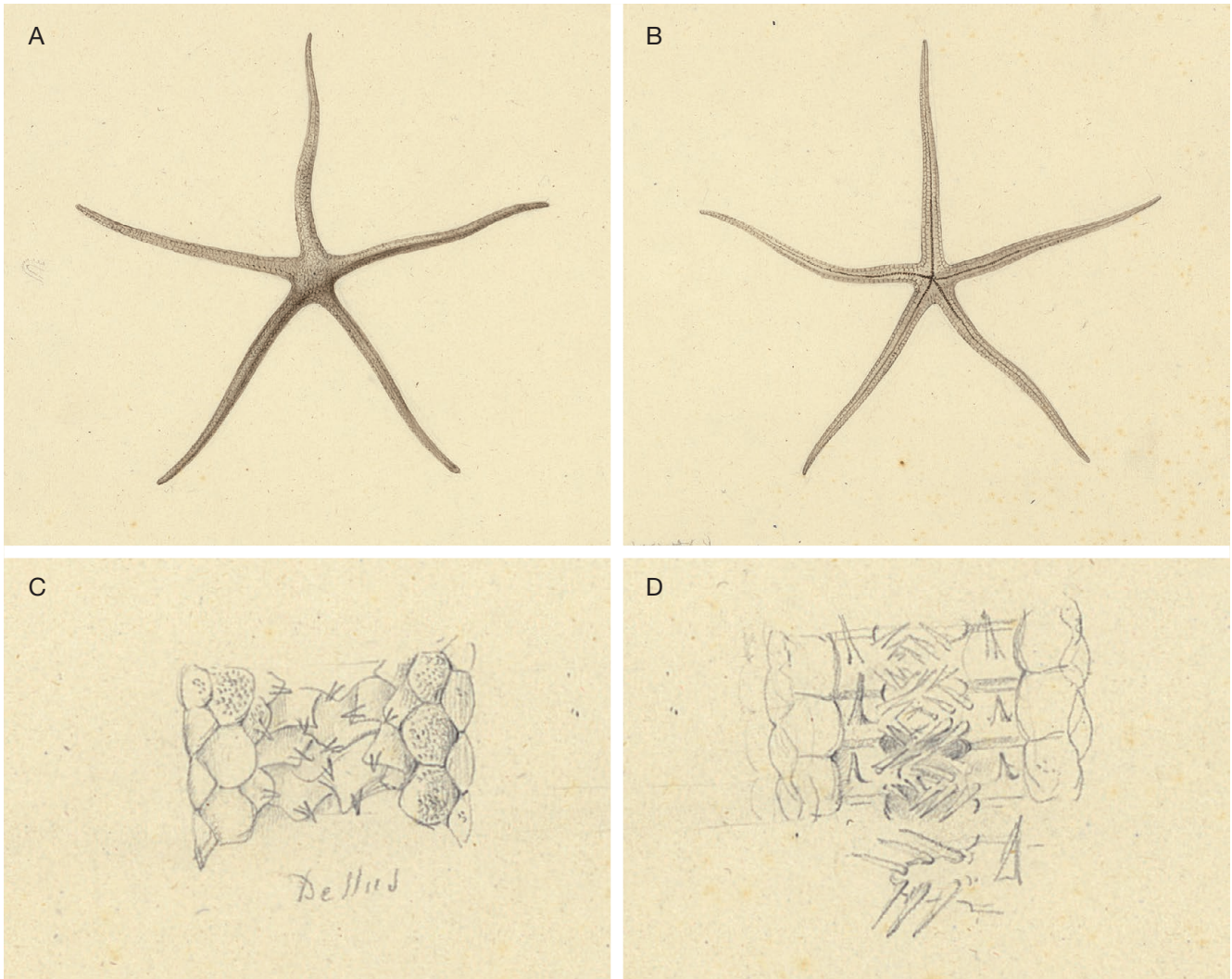


FIG. 39. — *Metrodira subulata* Gray, 1840: **A, B**, abactinal (**A**) and actinal (**B**) surfaces; **C**, abactinal structure of an arm section showing the minute granulation of abactinal plates and the arrangements of pairs or triplets of spines (text: 'above'); **D**, actinal structure of an arm section showing the triangular inner part of ambulacral plates bearing six furrow spines and projecting above the ambulacral groove; note also the occurrence of a single broad erected subambulacral spine (MHNH, Lesueur collection 74017, details, courtesy of MHNH).

*tenuispina* Lamarck, 1816, *Asterias*  
(Fig. 40)

*Asterias tenuispina* Lamarck, 1816: 561.

*Coscinasterias tenuispina* – Clark & Downey 1992: 427.

CURRENT STATUS. — *Coscinasterias tenuispina* (Lamarck, 1816).

DISTRIBUTION. — Mediterranean; East Atlantic from Bay of Biscay to Cape Verde Islands; West Atlantic (North Carolina, Cuba, Bahamas, eastern Brazil).

REMARK

Lamarck's type material could not be found in the MNHN.

*tessellata* var. C and D Lamarck, 1816, *Asterias*  
(Fig. 41)

*Asterias tessellata* var. C and D Lamarck, 1816: 552.

*Astrogonium lamarckii* Müller & Troschel, 1842: 56, n. syn.

*Goniaster tessellatus* – Clark & Downey 1992: 245.

CURRENT STATUS. — *Goniaster tessellatus* (Lamarck, 1816).

DISTRIBUTION. — North Carolina to northern Brazil and Morocco to Gabon. Contrarily to what is sometimes reported, *Goniaster tessellatus* does not occur in the Indo-Pacific ocean.

REMARK

Lamarck's type material could not be found in the MNHN. Yet, Müller & Troschel (1842), while giving no information on Lamarck's *Asterias tessellata*, described a new species (*Astrogonium lamarckii*) that they found in the Paris collection. Undoubtedly, *Astrogonium lamarckii* is the first junior synonym of Lamarck's *Asterias tessellata*. The holotype of the former is still kept in the MNHN (Fig. 41). It is to be assumed that the type specimen of *Astrogonium lamarckii* of Müller & Troschel's would also be that of Lamarck's *Asterias tessellata*.



FIG. 40. — *Asterias tenuispina* Lamarck, 1816: abactinal and actinal surfaces of a specimen of the MNHN (MNHN-IE-2014-532).



FIG. 41. — *Astrogonium lamarcki* Müller & Troschel, 1842 (holotype MNHN-IE-2014-65), a junior synonym and putative type specimen of *Asterias tessellata* Lamarck, 1816: abactinal and actinal views.

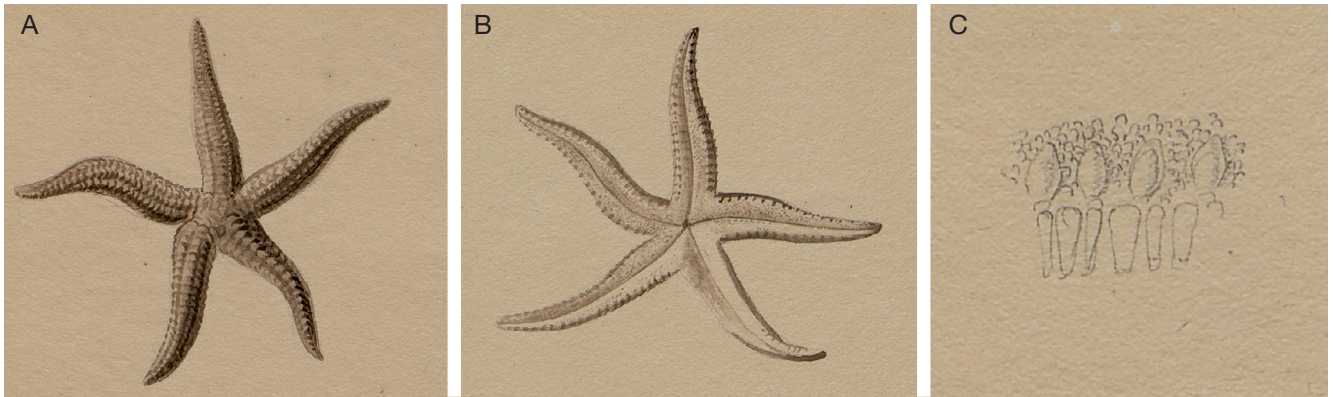


FIG. 42. — *Linckia tyloplax* H. L. Clark, 1914: **A, B**, abactinal (**A**) and actinal (**B**) surfaces; **C**, adambulacral spines (MHNH, Lesueur collection 74018, details, courtesy of MHNH).

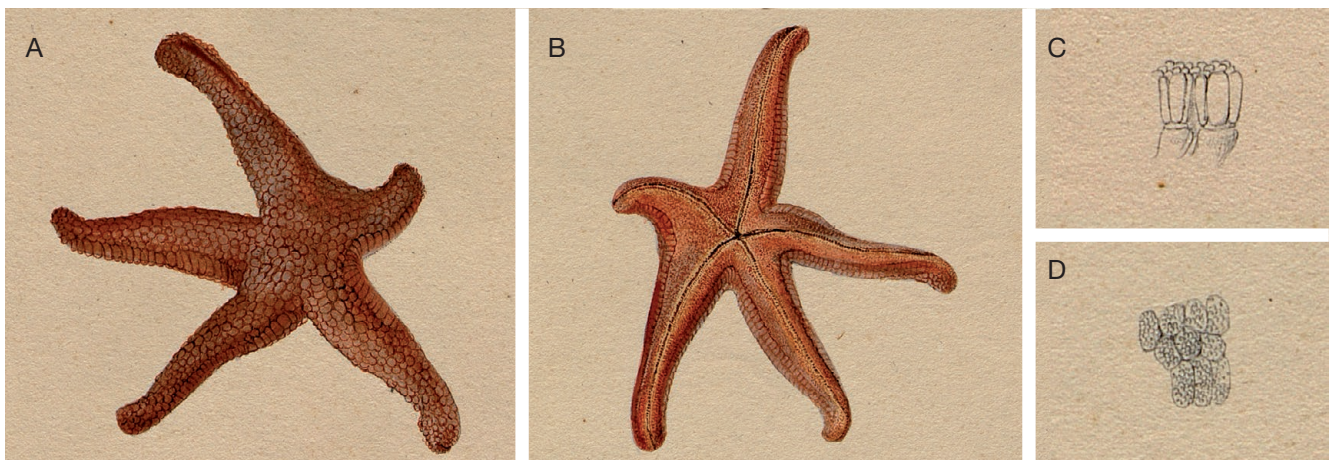


FIG. 43. — *Asterias variolata* Lamarck, 1816: **A, B**, abactinal (**A**) and actinal (**B**) surfaces; **C**, furrow spines; **D**, abactinal plates and granules (MHNH, Lesueur collection 74037, details, courtesy of MHNH).

*tyloplax* H. L. Clark, 1914, *Linckia*  
(Fig. 42)

*Linckia tyloplax* H. L. Clark, 1914: 147.

*Hacelia tyloplax* – Rowe & Gates 1995: 85.

CURRENT STATUS. — *Hacelia tyloplax* (H. L. Clark, 1914) (see Rowe & Gates 1995: 85).

MATERIAL EXAMINED. — MHNH; Lesueur drawings collection; ref. 74018; Baudin expedition; Péron and Lesueur leg.

DISTRIBUTION. — West Australia.

REMARK

Péron and Lesueur's material of the species could not be found in the MNHN.

*variolata* Lamarck, 1816, *Asterias*  
(Fig. 43)

*Asterias variolata* Lamarck, 1816: 565.

*Nardoa variolata* – Clark 1993: 343.

CURRENT STATUS. — *Nardoa variolata* (Bruzelius, 1805).

MATERIAL EXAMINED. — MHNH; Lesueur drawings collection; ref. 74037; Baudin expedition; Péron and Lesueur leg.

DISTRIBUTION. — East coast of Africa.

REMARK

Lamarck's material could not be found in the MNHN.

*vernicina* Lamarck, 1816, *Asterias*  
(Fig. 44)

*Asterias vernicina* Lamarck, 1816: 554.

*Petricia vernicina* – Clark 1993: 321.

CURRENT STATUS. — *Petricia vernicina* (Lamarck, 1816).

MATERIAL EXAMINED. — South Seas • MNHN-IE-2014-28; 2 syntypes; Baudin expedition (1800-1804); Péron and Lesueur leg. • MHNH; Lesueur drawings collection; ref. 74049; Baudin expedition.

DISTRIBUTION. — South coast of Australia to New South Wales, Tasmania, temperate South-West Pacific.

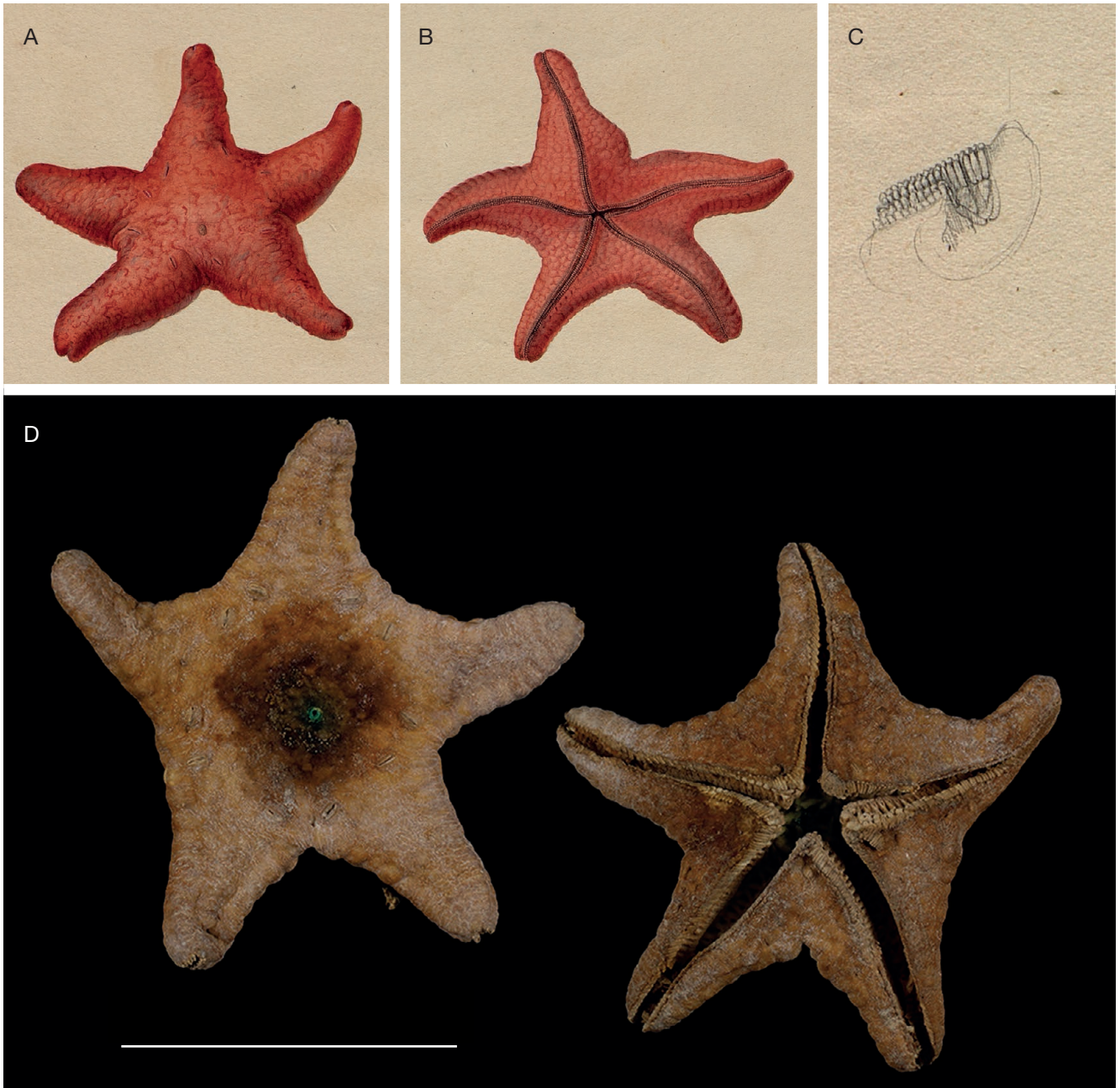


FIG. 44. — *Asterias vernicina* Lamarck, 1816: **A, B**, abactinal (**A**) and actinal (**B**) surfaces; **C**, adambulacral armament; **D**, syntype of *Asterias vernicina* (A-C, MHNH, Lesueur collection, 74049, details, courtesy of MHNH; D, MNHN-IE-2014-28).

## DISCUSSION

Lamarck's (1816) revision of the asteroid collection of the Paris Muséum should have been more extensive. Indeed, part of the asteroid material collected in the South Seas by Péron and Lesueur during the Baudin expedition was not included in his revision although having been received and sorted by him in 1804 (Jangoux 2021). Fortunately, Lesueur drew with great precision each asteroid species collected during the expedition, thus creating a pictorial register allowing them to be identified.

Comparative studies of Lamarck's description, Lamarck's type specimens and Lesueur drawings have allowed to reconsider

the status of some Lamarckian species. Current and revised status are summarised in Table 2.

Table 3 brings together the 47 species of asteroids presented previously: 31 species described by Lamarck in his 1816 publication (respectively, 21 species from the South Seas, four South Seas varieties erected into species, and seven species from elsewhere) and 16 additional species from the South Seas which reached the Museum in 1804 but were described by post Lamarckian authors. Péron and Lesueur were by far the main collectors as they brought back to Paris 39 different species, all from the South Seas, among which 36 were new to Science. By chance, this number corresponds to the number



TABLE 2. — Recapitulation of the taxonomic changes proposed in the present paper. See text and Table 3 for detail.

Original name	Older status	Current status
<i>calcar</i> var. <i>quinqueangula</i> , <i>Asterias</i> n. syn.	<i>Patriella regularis</i> (Verrill, 1867)	<i>Parvulastra exigua</i> (Lamarck, 1816)
<i>calcitrapa</i> var. 1, <i>Asterias</i> n. syn.	<i>Nomen dubium</i>	<i>Bollonaster pectinatus</i> (Sladen, 1883)
<i>calcitrapa</i> var. 2, <i>Asterias</i> n. syn.	<i>Nomen dubium</i>	<i>Astropecten vappa</i> Müller & Troschel, 1843
<i>cuspidata</i> , <i>Asterias</i>	<i>Goniaster tessellatus</i> (Lamarck, 1816)	<i>Mediaster cuspidatus</i> (Lamarck, 1816) n. comb.
<i>lamarckii</i> , <i>Astrogonium</i> n. syn.	<i>Pentagonaster lamarcki</i> (Müller & Trochel, 1842)	<i>Goniaster tessellatus</i> Lamarck, 1816
<i>nodosa</i> var. 3, <i>Asterias</i> n. syn.	<i>Protoreaster nodosus</i> (Linnaeus, 1758)	<i>Protoreaster lincki</i> (Blainville, 1830)
<i>pentagonula</i> , <i>Asterias</i> n. syn.	<i>Anthenea chinensis</i> Gray, 1840	<i>Tosia australis</i> (Müller & Troschel, 1842)
<i>pleyadella</i> , <i>Asterias</i> n. syn.	<i>Goniodiscaster pleyadella</i> (Lamarck, 1816)	<i>Protoreaster</i> sp.
<i>punctata</i> , <i>Asterias</i> n. syn.	<i>Petricia vernicina</i> (Lamarck, 1816)	<i>Asteropsis carinifera</i> (Lamarck, 1816)
<i>rosacea</i> var. <i>lobis senis</i> , <i>Asterias</i> n. syn.	<i>Anseropoda rosacea</i> (Lamarck, 1816)	<i>Anseropoda</i> sp.
<i>setaceus</i> , <i>Asteriscus</i> n. syn.	<i>Asterina setacea</i> (Müller & Troschel, 1842)	<i>Paranepanthia grandis</i> (H.L. Clark, 1928)

TABLE 3. — The Lamarckian Asteroids. Abbreviations and symbol: **Död.:** Döderlein; **Lam.:** Lamarck; **M.Tr.:** Müller & Troschel; **WORMS:** World Register of Marine Species; \* synonym; 1, collections by Péron and Lesueur and drawings by Lesueur were done between 1801 and 1804; 2, Lesueur's drawings do not represent type specimen.

Original name	Status	Origin	Collector(s) <sup>1</sup>	Drawings <sup>1</sup> (type)	Photos (other)
1. <i>africanus</i> , <i>Asteracanthion</i> M.Tr.	<i>Marthasterias africana</i> (M.Tr.)	South Africa	Péron & Lesueur Lesueur	–	–
2. <i>angulatus</i> , <i>Archaster</i> M.Tr.	<i>Archaster angulatus</i> M.Tr.	South Seas	Péron & Lesueur Lesueur	–	–
3. <i>australiae</i> , <i>Anthenea</i> Död.	<i>Anthenea australiae</i> Död.	W Australia	Péron & Lesueur Lesueur	MNHN	–
4. <i>calcar hexagona</i> , <i>Asterias</i> Lam.	<i>Meridiastra gunni</i> (Gray)*	SW Australia	Péron & Lesueur Lesueur	MNHN	–
5. <i>calcar octogona</i> , <i>Asterias</i> Lam.	<i>Meridiastra calcar</i> (Lam.)	SW Australia	Péron & Lesueur Lesueur	MNHN	–
6. <i>calcar quinqueangula</i> , <i>Asterias</i> Lam. n. syn.	<i>Parvulastra exigua</i> (Lam.)	SW Australia	Péron & Lesueur Lesueur	MNHN	–
7. <i>calcitrapa</i> var. 1, <i>Asterias</i> Lam. n. syn.	<i>Bollonaster pectinatus</i> (Sladen)	South Seas	Péron & Lesueur Lesueur	–	–
8. <i>calcitrapa</i> var. 2, <i>Asterias</i> Lam. n. syn.	<i>Astropecten vappa</i> (M.Tr.)	South Seas	Péron & Lesueur Lesueur	–	–
9. <i>carinifera</i> , <i>Asterias</i> Lam.	<i>Asteropsis carinifera</i> (Lam.)	South Seas	Péron & Lesueur Lesueur	MNHN	–
10. <i>clavigera</i> , <i>Asterias</i> Lam.	<i>Mithrodia clavigera</i> (Lam.)	Mauritius	Péron & Lesueur	–	MNHN
11. <i>cuspidata</i> , <i>Asterias</i> Lam.	<i>Mediaster cuspidatus</i> (Lam.) n. comb.	South Seas	Péron & Lesueur Lesueur	MNHN	–
12. <i>cylindrica</i> , <i>Asterias</i> (part) Lam.	<i>Dactylosaster cylindricus</i> (Lam.)	Mauritius	Péron & Lesueur Lesueur	MNHN	–
13. <i>cylindrica</i> , <i>Asterias</i> (part) Lam.	<i>Ophidiaster purpuratus</i> Perrier *	Mauritius	Péron & Lesueur Lesueur	MNHN	–
14. <i>decanus</i> , <i>Echinaster</i> M.Tr.	<i>Plectaster decanus</i> (M.Tr.)	South Seas	Péron & Lesueur Lesueur	–	–
15. <i>discoidea</i> , <i>Asterias</i> Lam.	<i>Culcita schmideliana</i> (Bruzelius)*	South Seas	Péron & Lesueur Lesueur	–	–
16. <i>echinophora</i> , <i>Asterias</i> Lam.	<i>Echinaster echinophorus</i> (Lam.)	Brazil	Unknown	–	MNHN
17. <i>exigua</i> , <i>Asterias</i> Lam.	<i>Parvulastra exigua</i> (Lam.)	SW Australia	Péron & Lesueur Lesueur	MNHN	–
18. <i>granifera</i> , <i>Asterias</i> Lam.	<i>Uniophora granifera</i> (Lam.)	South Seas	Péron & Lesueur Lesueur	MNHN	–
19. <i>helianthus</i> , <i>Asterias</i> Lam.	<i>Heliasaster helianthus</i> (Lam.)	?Chile	Unknown Bruguière	–	–
20. <i>hesperus</i> , <i>Archaster</i> M.Tr.	<i>Craspidaster hesperus</i> (M.Tr.)	South Seas	Péron & Lesueur Lesueur <sup>2</sup>	–	–
21. <i>lamarckii</i> , <i>Astrogonium</i> M.Tr. n. syn.	<i>Goniaster tessellatus</i> (Lam.)	Atlantic	Unknown	–	MNHN
22. <i>magnificum</i> , <i>Astrologum</i> M.Tr.	<i>Tosia magnifica</i> (M.Tr.)	South Seas	Péron & Lesueur Lesueur	–	–
23. <i>milleporella</i> , <i>Asterias</i> Lam.	<i>Fromia milleporella</i> (Lam.)	South Seas	Péron & Lesueur Lesueur	MNHN	–
24. <i>multifora</i> , <i>Asterias</i> Lam.	<i>Linckia multifora</i> (Lam.)	South Seas	Péron & Lesueur Lesueur	–	–
25. <i>muricata</i> , <i>Coscinasterias</i> Verrill	<i>Coscinasterias muricata</i> Verrill	South Seas	Péron & Lesueur Lesueur	–	–
26. <i>nodosa</i> var. 1 & 2, <i>Asterias</i> Lam.	<i>Protoreaster nodosus</i> (Linnaeus)*	South Seas	Péron & Lesueur Lesueur	–	–
27. <i>nodosa</i> var. 3, <i>Asterias</i> Lam. n. syn.	<i>Protoreaster lincki</i> (Blainville)	Mauritius	Péron & Lesueur	–	MNHN
28. <i>obtusangula</i> , <i>Asterias</i> Lam.	<i>Pseudoreaster obtusangula</i> (Lam.)	South Seas	Péron & Lesueur Lesueur	MNHN	–
29. <i>ocellifera</i> , <i>Asterias</i> (part) Lam.	<i>Nectria ocellifera</i> (Lam.)	South Seas	Péron & Lesueur Lesueur	MNHN	–
30. <i>ocellifera</i> , <i>Asterias</i> (part) Lam.	<i>Nectria ocellata</i> Perrier	South Seas	Péron & Lesueur	–	MNHN
31. <i>ophidiana</i> , <i>Asterias</i> Lam.	<i>Ophidiaster ophidianus</i> (Lam.)	Mediterranea	Unknown	–	WORMS
32. <i>penicillaris</i> , <i>Asterias</i> Lam.	<i>Asterinopsis penicillaris</i> (Lam.)	South Seas	Péron & Lesueur Lesueur	–	–
33. <i>pentagonula</i> , <i>Asterias</i> Lam. n. syn.	<i>Tosia australis</i> Gray	South Seas	Péron & Lesueur Lesueur	–	–
34. <i>pleyadella</i> , <i>Asterias</i> Lam. n. syn.	<i>Protoreaster</i> sp.	South Seas	Péron & Lesueur Lesueur	MNHN	–
35. <i>punctata</i> , <i>Asterias</i> Lam. n. syn.	<i>Asteropsis carinifera</i> (Lam.)	South Seas	Péron & Lesueur Lesueur	MNHN	–
36. <i>purpureus</i> , <i>Ophidiaster</i> Perrier	<i>Ophidiaster hemprichi</i> M.Tr.*	Mauritius	Péron & Lesueur Lesueur	–	–
37. <i>rosacea lobis quindenis</i> , <i>Asterias</i> Lam.	<i>Anseropoda rosacea</i> (Lam.)	South Seas	Péron & Lesueur Lesueur	MNHN	–
38. <i>rosacea lobis senis</i> , <i>Asterias</i> Lam. n. syn.	<i>Anseropoda</i> sp.	South Seas	Péron & Lesueur Lesueur	–	–
39. <i>senegalensis</i> , <i>Asterias</i> Lam.	<i>Luidia senegalensis</i> (Lam.)	West Indies	Adanson	–	MNHN
40. <i>setaceus</i> , <i>Asteriscus</i> M.Tr. n. syn.	<i>Paranepanthia grandis</i> H. L. Clark	South Seas	Péron & Lesueur Lesueur	–	–
41. <i>striata</i> , <i>Asterias</i> Lam.	<i>Valvaster striatus</i> (Lam.)	Mauritius	Mathieu	–	MNHN
42. <i>subulata</i> , <i>Asterias</i> Lam.	<i>Chaetaster longipes</i> (Bruzelius)*	Mediterranea	Unknown	–	MNHN
43. <i>subulata</i> , <i>Metrodira</i> Gray	<i>Metrodira subulata</i> Gray	South Seas	Péron & Lesueur Lesueur	–	–
44. <i>tenuispina</i> , <i>Asterias</i> Lam.	<i>Coscinasterias tenuispina</i> (Lam.)	Mediterranea	Unknown	–	MNHN
45. <i>tessellata</i> var. C & D, <i>Asterias</i> Lam.	<i>Goniaster tessellatus</i> (Lam.)	Atlantic	Unknown	–	MNHN
46. <i>tyloplax</i> , <i>Linckia</i> H. L. Clark	<i>Hacelia tyloplax</i> (H. L. Clark)	South Seas	Péron & Lesueur Lesueur	–	–
47. <i>variolata</i> , <i>Asterias</i> Lam.	<i>Nardoa variolata</i> (Bruzelius)	Mauritius	Unknown Lesueur <sup>2</sup>	–	–
48. <i>vernicina</i> , <i>Asterias</i> Lam.	<i>Petricia vernicina</i> (Lam.)	South Seas	Péron & Lesueur Lesueur	MNHN	–

of new species of asteroids from the South Seas estimated by Lamarck in his 1804 report. Clearly the Paris Muséum had at the time the first and quite exhaustive collection of shallow water asteroids from Australian seas.

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