

The Muricidae (Gastropoda: Muricoidea) from Oman with the description of four new species

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ABSTRACT. Four new species are described from Mirbat in the Dhofar governorate, Oman. *Aspella omanensis* n. sp. is compared with *A. thomassini* Houart, 1985 from Madagascar, Mauritius and nearby localities, *Dermomurex trivariocosus* n. sp. is compared with three species from the Indo-West Pacific: *D. trondleorum* Houart, 1991 from French Polynesia, *D. triclota* Houart, 2001 from New Caledonia and *D. fitialeatai* Houart, 2015 from Papua New Guinea, *Favartia (Favartia) mikrostenos* n. sp. is compared with *F. (F.) roseotincta* Houart & Gori, 2011 from Oman and with *F. (F.) jeanae* Bertsch & D'Attilio, 1980 from the Philippines and *Monstrotiphis goniodes* n. sp. is compared with *M. tangaroa* from New Zealand and a few other species from the Indo West-Pacific.

Six species are reported for the first time from Oman: *Pteryarchia barclayana* (H. Adams, 1873), *Ergalatax contracta* (Reeve, 1846), *Pascula darrosensis* (E.A. Smith, 1884), *P. ochrostoma* (Blainville, 1832), *Orania archaea* Houart, 1995 and *Spinidrupa infans* (E. A. Smith, 1884). The *Homalocantha* group from the Red Sea and the Arabian Peninsula is discussed; variations in form and colour of recently described species are commented and illustrated; new distribution spots in Oman are recorded for several species; the protoconch of *Muricopsis chiarae* Bozzetti, 1991 is described and illustrated for the first time and all the species described from Oman since 1995 are illustrated.

RÉSUMÉ. Quatre nouvelles espèces sont décrites de Mirbat dans le governorat de Dhofar, Oman. *Aspella omanensis* n. sp. est comparée à *A. thomassini* Houart, 1985 de Madagascar, de l'île Maurice et de localités proches, *Dermomurex trivariocosus* n. sp. est comparée à trois espèces de l'Indo-Ouest Pacifique: *D. trondleorum* Houart, 1991 de Polynésie française, *D. triclota* Houart, 2001 de Nouvelle-Calédonie et *D. fitialeatai* Houart, 2015 de Papouasie-Nouvelle-Guinée, *Favartia (Favartia) mikrostenos* n. sp. est comparée à *F. (F.) roseotincta* Houart & Gori, 2011 de Oman et à *F. (F.) jeanae* Bertsch & D'Attilio, 1980 des Philippines et *Monstrotiphis goniodes* n. sp. est comparée à *M. tangaroa* de Nouvelle-Zélande et à quelques autres espèces de l'Indo-Ouest Pacifique.

Six espèces sont signalées pour la première fois à Oman: *Pteryarchia barclayana* (H. Adams, 1873), *Ergalatax contracta* (Reeve, 1846), *Pascula darrosensis* (E.A. Smith, 1884), *P. ochrostoma* (Blainville, 1832), *Orania archaea* Houart, 1995 et *Spinidrupa infans* (E. A. Smith, 1884). Le groupe *Homalocantha* de la mer Rouge et de la péninsule arabique est discuté; des variations de forme et de couleur d'espèces décrites récemment sont commentées et illustrées; de nouveaux points de distribution en Oman sont signalés pour quelques espèces; La protoconque de *Muricopsis chiarae* Bozzetti, 1991 est décrite et illustrée pour la première fois et toutes les espèces décrites de Oman après 1995 sont illustrées.

INTRODUCTION

A total of 72 species of Muricidae are reported from the Sultanate of Oman (Fig. 1, Table 1), of which 54 were previously identified by Bosch & Bosch (1982) and Bosch et al. (1995). Four new species are described, six new records are signaled for the first time from Oman and the eight species that were described since 1995 are also illustrated.

Six subfamilies are represented in Oman: Muricinae (20 species), Muricopsinae (11 species), Ergalataxinae (13 species), Rapaninae (14 species), Typhinae (2 species) and Coralliophilinae (12 species).

We follow the classification of Barco et al. (2010), Claremont et al. (2013a, b) and WoRMS, with a few adaptations.

The analyses in Barco et al. (2010) indicate that Muricinae, as traditionally conceived, are polyphyletic. They suggest that the species belonging to the genera *Pterynotus*, *Pteryarchia*, *Attiliosa* and *Dermomurex*, and most probably *Aspella*, should be excluded from this subfamily.

On the other hand, they also pointed out that the results of their analysis for *Homalocantha*, which has

been traditionally considered to belong in Muricopsinae or Muricinae, do not support either hypothesis.

The phylogeny and classification of these genera requiring further study and nothing having been done so far, we will continue to classify these genera temporarily in the subfamily Muricinae in a conservative way.

Material and methods

Material

The material used in this study is based on two publications including species from Oman: Bosch & Bosch (1982) and Bosch et al. (1995). Material was also examined from the collections of the authors. Additional material, not seen before, helped considerably to compare the species studied previously, to enlarge the range of variability of described species such as *Favartia roseotincta* Houart & Gori, 2011 and *F. colombi* Houart & Gori, 2011, to extend their geographical and bathymetrical distribution in Oman and to describe four new species.

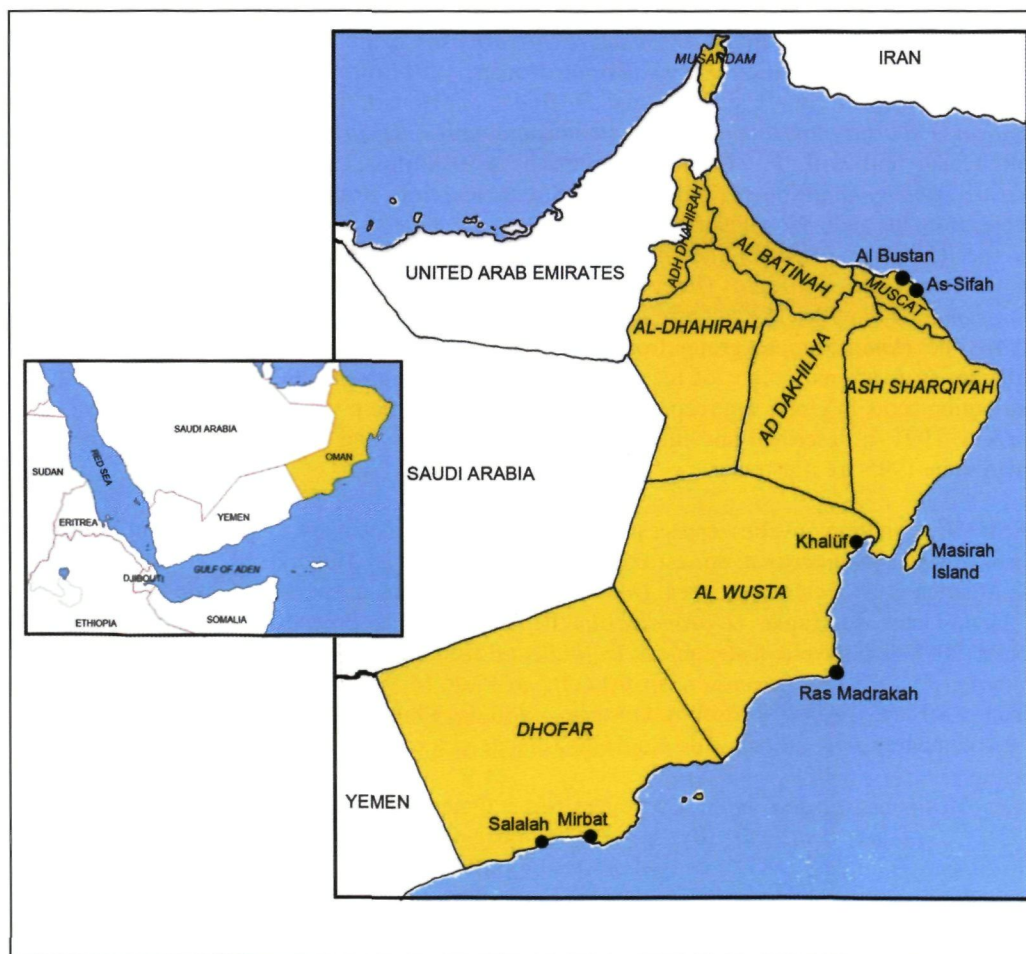


Figure 1. Map of the Sultanate of Oman with localities of new records and new species

Methods

The characters used to describe the shell morphology are the general aspect of the shell, shape and size, colour, shape of the spire and number of protoconch and teleoconch whorls, features of the protoconch, shape of the teleoconch whorls and features of the suture and of the subsutural band, axial and spiral sculpture, aperture and siphonal canal and operculum (Figs 2 and 4).

The new species descriptions are based on the holotype and on a representative selection of the paratypes.

Since depth data for many samples are provided as ranges (for instance 10-18 m) the bathymetric range for a species is provided using the inner values of the recorded depth-ranges: the largest value of the minimums and the lowest value of the maximums of all the recorded ranges.

Abbreviations

Repositories

IRSNB: Institut royal des Sciences naturelles de Belgique, Bruxelles, Belgium.

MNHN: Muséum national d'Histoire naturelle, Paris, France.

NHMUK: Natural History Museum, United Kingdom, London, U.K.

NMW: National Museum of Wales, Cardiff, U.K.

ZMA: Zoological Museum, Amsterdam (now NCB Naturalis, Leiden), the Netherlands.

JR: Collection of Jose Rosado.

RH: Collection of Roland Houart.

SG: Collection of Sandro Gori.

Other abbreviations

ad: adult shell.

dd: empty shell.

juv: juvenile shell.

lv: live collected specimen.

sub: subadult shell.

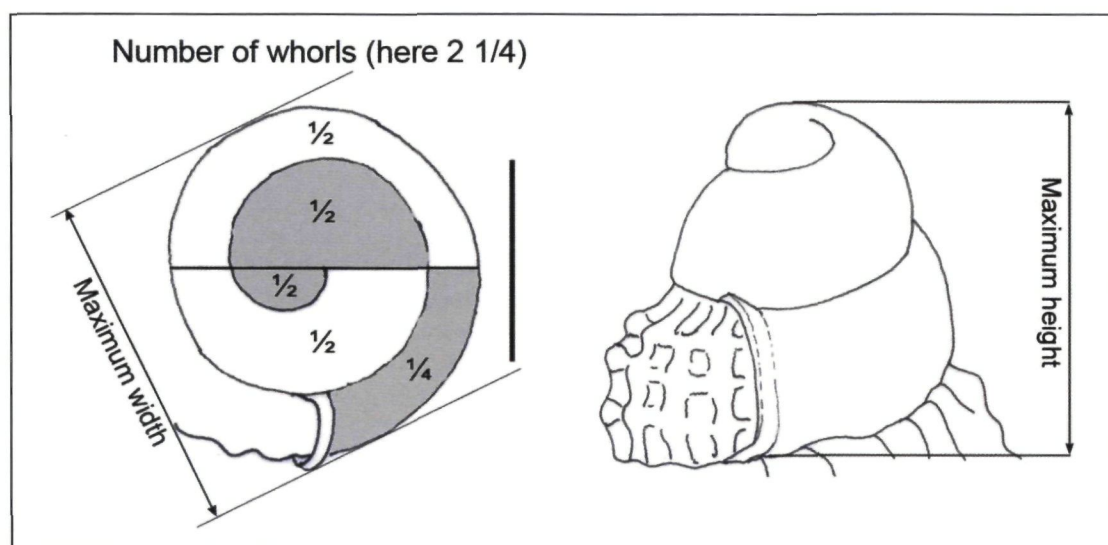


Fig. 2. Measurements of the protoconch (scale bar: 500 μ m)

Terminology used to describe the spiral cords and the apertural denticles (after Merle 2001 and 2005) (Fig.4). Terminology in parentheses: variable features.

Convex part of teleoconch whorl and siphonal canal

ab: abapical (or abapertural);

abis: abapical infrasutural secondary cord (on subsutural ramp);

ABP: abapertural primary cord on the siphonal canal;

ad: adapical (or adapertural);

adis: adapical infrasutural secondary cord (on subsutural ramp);

ADP: adapertural primary cord on the siphonal canal;

IP: infrasutural primary cord (primary cord on subsutural ramp);

MP: median primary cord on the siphonal canal;

P: primary cord;

P1: shoulder cord;

P2-P6: primary cords of the convex part of the teleoconch whorl;

s: secondary cord;

s1-s6: secondary cords of the convex part of the teleoconch whorl (example: s1 = secondary cord between P1 and P2; s2 = secondary cord between P2 and P3, etc.);

SP: subsutural cord;

t: tertiary cord.

Aperture

D1 to D5: abapical denticles;

ID: Infrasutural denticle.

SYSTEMATICS

I. NEW TAXA

Family **Muricidae** Rafinesque, 1815

Subfamily **Muricinae** Rafinesque, 1815

Genus *Aspella* Morch, 1857

Type species (by monotypy): *Ranella anceps* Lamarck, 1822, Mediterranean.

Aspella omanensis n. sp.

Figs 3, 4A, 5A-J

Type material. Oman, Dhofar, Mirbat, The Hill, 16°58' N, 54°42' E, 20 m, lv, ad, holotype MNHN IM-2000-33182 (ex SG).

Paratypes: Oman, Dhofar, Mirbat, The Hill, 16°58' N, 54°42' E, 20 m, 1 lv, ad, SG; Oman, Dhofar, Mirbat, Hamdy's Block, 35 m, 1 lv, ad, SG; Oman, Dhofar, Mirbat, Deep Plateau, 16°56' N, 54°43' E, 32 m, 1 lv, juv, SG; Oman, Dhofar, South Mirbat, 16°58' N, 54°41' E, 25 m, 1 lv, ad, SG; Oman, Dhofar, Mirbat area, 16-22 m, 2 lv, ad, JR; Oman, Dhofar, East Mirbat, sea side of Hamdy's Block, 16°57' N, 54°46' E, 32-35 m, flat rocks and fine sand, 1 lv, ad, JR; Oman, East Mirbat, Dhofar, Deep Plateau, 16°56' N and 54°43' E, flat rocks and fine sand, 28-32 m, 1 lv, ad, JR; Oman, Dhofar, Mirbat, 35 m, 1 lv, ad, RH (ex SG); Oman, Dhofar, Mirbat, 16°57' N, 54°44' E, 28 m, 1 lv, juv, RH (ex SG).

Type locality. Oman, Dhofar, Mirbat, The Hill, 16°58' N, 54°42' E, 20 m.

Other material. Oman, Dhofar, Mirbat, Hamdy's Block, 35 m, 1 dd, SG; Oman, Dhofar, Mirbat, Hamdy's Block, 20 m, sand, 1 dd, SG; Oman, Dhofar, Mirbat, Deep Plateau, 16°56' N, 54°43' E, 32 m, 2 ad, lv, 1 ad, dd, SG; Oman, Dhofar, Mirbat, east of Bird Island, 20 m, 1 dd, SG; Oman, Dhofar, Mirbat, east of Bird Island, 16°56' N, 54°44' E, 25 m, 1 lv, SG; Oman, Dhofar, Mirbat, Marriott Deep Wall, 16°57' N, 54°44' E, 20 m, 1 dd, ad, SG; Oman, Dhofar, Mirbat, English Bay, 16°57' N, 54°49' E, 10 m, 1 dd, ad, SG; Oman, Dhofar, Mirbat, The Hill, 16°58' N, 54°41' E, 27 m, 2 lv, ad, SG; Oman, Dhofar, Mirbat, 16°58' N, 54°41' E, 25 m, 1 lv, ad, SG; Oman, Dhofar, East Mirbat, 32-36 m, 1 dd, ad, 2 lv, ad & sub, RH, 1 lv, ad, JR.

Distribution. Oman, Dhofar, Mirbat, living at 20-35 m.

Description. Shell small for the genus, up to 8.5 mm in length. Length/width ratio 1.7-1.8. Slender, lightly built, lanceolate, flattened, smooth. Subsutural band broad, strongly sloping, convex.

Shell greyish white covered by a white intritacalx with minutely sculptured wire-netting surface (Fig. 5I). Edge of aperture white, light brownish orange within.

Spire high with 1.5-2 protoconch whorls and up to 5 weakly convex, flattened teleoconch whorls. Suture impressed, partially obscured by broad buttresses of preceding whorl. Protoconch rounded, relatively large. Whorls rounded, smooth. Height and width 700 µm. Terminal lip relatively broad, weakly raised, opisthocline.

Axial sculpture of 4 narrow varices from first to last teleoconch whorl. First to third whorl with evenly high varices. Fourth and last whorl with two narrow, high, lateral varices; ventral and dorsal axial sculpture reduced to low varix, connected to preceding whorl with broad buttress; other narrow or moderately broad buttresses between high and low varices. Spiral sculpture shallow, consisting of very low, broad, almost indistinct cords (P1-P5) ending as 2 or 3 obvious flattened lobes on lateral varices. Spiral cords almost evenly broad except, narrower, indistinct P5. Spiral cords visible when intritacalx removed.

Aperture small, ovate. Columellar lip narrow, smooth, adherent to shell. Anal notch shallow, broad. Outer lip weakly erect, smooth, smooth within. Siphonal canal short, 18-19 % of total shell length, narrow, strongly dorsally bent at tip, narrowly open. Operculum light tan, ovate, with apical nucleus.

Radula unknown.

Remarks. There are currently 21 valid extant species of *Aspella* of which 12 occurring in the Indo-West Pacific. Two of them, *A. hildrunae* Houart & Tröndlé, 2008 and *A. producta* (Pease, 1861) differ from *A. omanensis* n. sp. in their larval development. They have a multispiral, conical protoconch of 2-2.5 whorls with a terminal lip of sinusigera type (Fig. 5N) as opposed to a protoconch of 1.5-2 whorls and opisthocline terminal lip in *Aspella omanensis* n. sp. and do not need to be compared further here. Moreover they also obviously differ in shell morphology.

Aspella omanensis n. sp. differs from *A. thomassini* Houart, 1985 (Fig. 5K-M) from Madagascar and nearby localities, another species with paucispiral protoconch of 1.5 whorls and cancellate intritacalx, in having a flatter shell (width/thickness of last teleoconch whorl average ratio 1.76) compared to the thicker *A. thomassini* (average width/thickness ratio 1.5), in having a smoother and minutely cancellate intritacalx, smoother, broader, lower and less obvious spiral cords, smaller buttresses connecting the preceding whorl, a lower spire and a narrower, more strongly ovate aperture.

The other *Aspella* species differ from *Aspella omanensis* n. sp. in having a nearly smooth or spirally striate intritacalx sculpture rather than a finely cancellate one and in having straighter lateral varices while *Aspella omanensis* n. sp. has the lateral varices with 3 more or less expanded lobes on the last teleoconch whorl.

Etymology. Named after the Sultanate of Oman, where the specimens were collected.

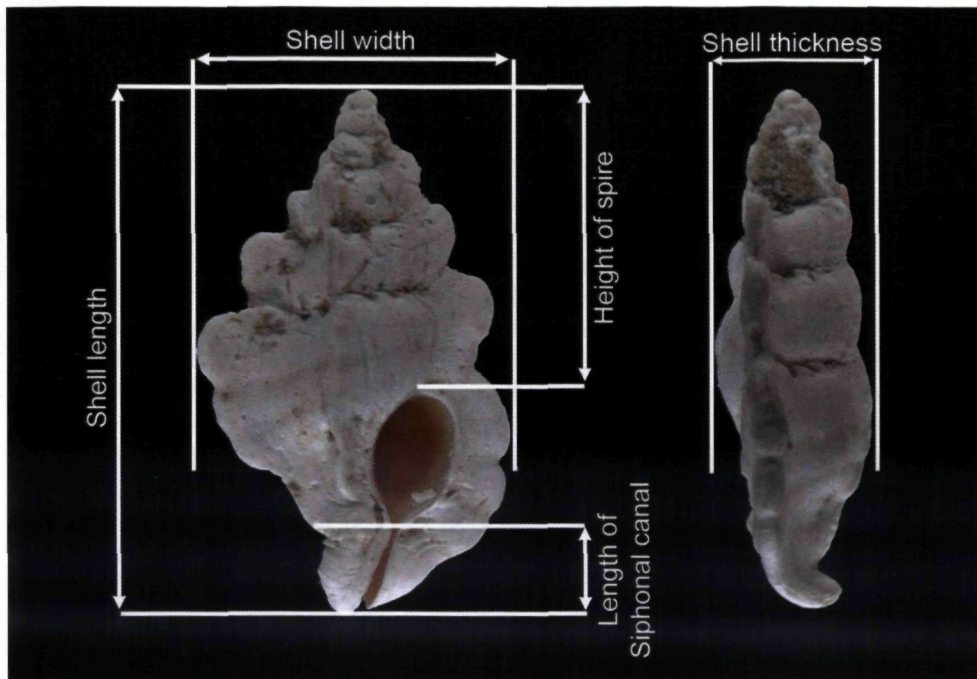


Figure 3. Definition of the shell measurements: *Aspella omanensis* n. sp., holotype MNHN IM-2000-33182, 8.2 x 4.9 mm.

Genus *Dermomurex* Monterosato, 1890

Type species by original designation: *Murex scalarinus* Bivona-Bernardi, 1832 (= *Murex scalaroides* Blainville, 1829), Mediterranean Sea and Eastern Atlantic (Senegal).

Discussion. In a discussion preceding the description of a new *Dermomurex* species (Houart, 2015) I pointed out the difficulty to separate *Dermomurex* s.s. from *Dermomurex* (*Trialatella*). *Dermomurex* s.s. has three to six varices per whorl, an elongate spire and a rather short siphonal canal compared to *Trialatella* which has consistently three varices on the last teleoconch whorl, a shorter spire and a more elongated siphonal canal.

Although the new species described here could fit in *Trialatella* with its three varices on the last whorl and a shorter spire, its siphonal canal is obviously shorter than typical *Trialatella* species.

Therefore the decision was taken here to describe this new species as I did earlier (Houart, 2015), without any subgeneric distinction.

Dermomurex trivricosus n. sp.

Figs 4B; 6A-J

Type material. Oman, Dhofar, East Mirbat, 32-36 m, 1v, ad, holotype MNHN IM-2000-33183 (ex JR).

Paratypes: Oman, Dhofar, East Mirbat, 32-36 m, 1lv, juv, MNHN IM-2000-33184 (ex JR); 1 dd, ad and 1lv, juv, SG (ex JR); 1lv, juv, JR; 1lv, juv, RH (ex JR); Oman, Dhofar, East Mirbat, Deep Plateau, 28-32 m, 1lv, ad, JR.

Type locality. Oman, Dhofar, East Mirbat, 32-36 m.

Distribution. Oman, Dhofar, Mirbat, living at 32 m.

Description. Shell medium sized for the genus, up to 15.9 mm in length at maturity (holotype). Length/width ratio 1.86 (holotype). Lanceolate, narrowly ovate, heavy, nodose. Subsutural ramp narrow and weakly sloping in spire whorls, slightly broader, more strongly sloping in last teleoconch whorl.

Creamy white or light tan, covered by strongly spirally striate, white intritacalx. Aperture bluish-white within with dark orange blotches on apertural denticles (holotype).

Spire high with 1.5 protoconch whorls and up to 5 broad, convex, weakly shouldered, nodose teleoconch whorls. Suture strongly impressed. Protoconch small, whorls rounded, smooth. Maximum height 700 μ m, width 800 μ m. Terminal lip thin, weakly raised, opisthocline.

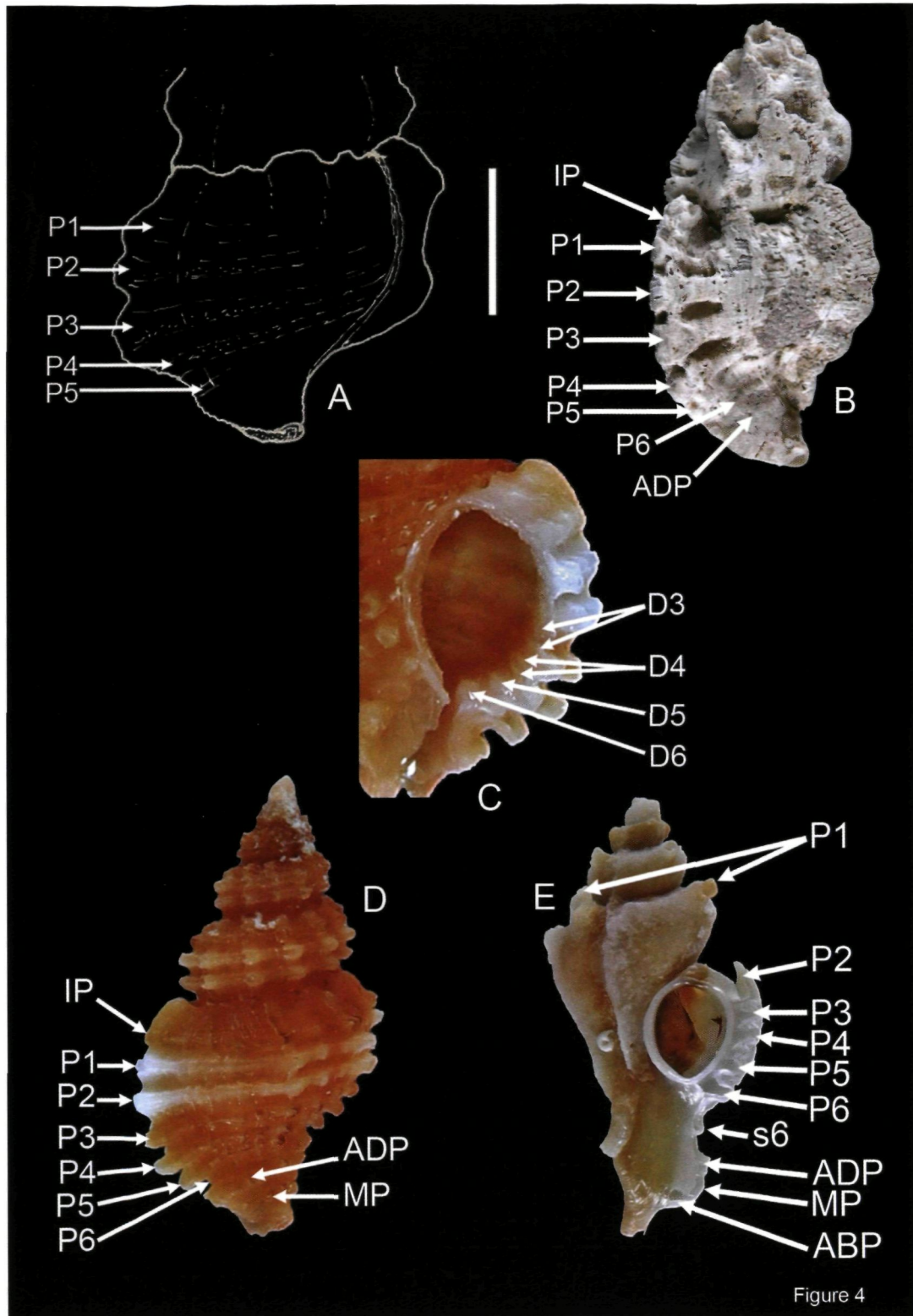


Figure 4

Figure 4

A-E. Spiral sculpture and apertural denticles morphology

A. *Aspella omanensis* n. sp., holotype MNHN IM-2000-33182; **B.** *Dermomurex (Trialatella) trivaricosa* n. sp., holotype MNHN IM-2000-33183; **C-D.** *Favartia (Favartia) mikrostenos* n. sp., holotype MNHN IM-2000-33185; **E.** *Monstrotrophis goniodes* n. sp., holotype MNHN IM-2000-33186.

Axial sculpture of teleoconch whorls consisting of high, narrow varices, more strongly developed on shoulder, connecting varices of previous whorls. First teleoconch whorl with 7 varices, second, third and fourth with 6, last whorl with 3 varices and a single, low node between varices, remnants of 3 varices of spire whorls, only subsisting on last whorl as low nodes and narrow buttresses connecting varices of previous whorls. Spiral sculpture of rounded, longitudinally grooved cords, more conspicuous on last teleoconch whorl, consisting of a very narrow, low IP, narrow P1, broad, high P2, P3 and P4, narrow, low, almost indistinct P5 and P6 and broad, low ADP. Spiral cords less conspicuous in juveniles, covered by thick intritacalx, partly or completely removed on the two adult shells.

Aperture moderately large, ovate. Columellar lip narrow, smooth, rim adherent. Anal notch not perceptible. Outer lip weakly erect, smooth, with very weak, low, almost indistinct denticles within: ID, D1-D5. Siphonal canal short, 26% of total shell length, narrow, strongly dorsally bent at tip, open. Operculum not examined, animal dried deep in shell. Radula unknown.

Remarks. There are three *Dermomurex* species with three varices on the last teleoconch whorl known in the Indo-West Pacific, namely *D. trondleorum* Houart, 1990 from French Polynesia, *D. tricolotae* Houart, 2001 from New Caledonia and *D. fitialeatai* Houart, 2015 from Papua New Guinea. All the other trivariate species occur in the Western Atlantic or in the Eastern Pacific.

Dermomurex trivaricosus n. sp. differs from *D. trondleorum* (Fig. 6K) in having a lower spire, a broader shell, a broader, shorter siphonal canal and an obviously comparatively broader aperture. It also differs in having spire whorls with 6 or 7 varices and 3 varices only on the last whorl opposed to 3 varices per whorl already from second teleoconch whorl in *D. trondleorum*.

From *D. tricolotae* (Fig. 6L) the new species differs in having a more rounded, less shouldered shell, a lower, broader, less acute spire, broader and more conspicuous primary spiral cords, a shorter siphonal canal and a smaller aperture. Moreover, *D. tricolotae* also has only the first teleoconch whorl with 6 varices, all subsequent whorls having 3 varices, opposed to *D. trivaricosus* n. sp. which has 3 varices only on last whorl.

From *D. fitialeatai* (Fig. 6M-N) *D. trivaricosus* n. sp. differs in having a broader shell with a shorter, less acute spire, a shorter, broader siphonal canal and broader primary spiral cords. *D. fitialeatai* also has trivariate four last teleoconch whorls opposed to *D. trivaricosus* n. sp. which has 3 varices only on its last whorl. Furthermore in *D. trivaricosus* the intritacalx is strongly spirally striate (Fig. 6G) rather than minutely reticulate in *D. fitialeatai* (Fig. 6N).

Etymology. *Tri* (L): three, and *varicosus* (L): varix, refers to the trivariate last teleoconch whorl.

Subfamily **Muricopsinae** Radwin & D'Attilio, 1971

Genus *Favartia* Jousseaume, 1880

Subgenus *Favartia* Jousseaume, 1880

Type species (by original designation): *Murex breviculus* Sowerby, 1834, Indo-West Pacific.

Favartia (Favartia) mikrostenos n. sp.

Figs 4C-D; 7A-J

Favartia (Favartia) roseotincta — Houart et al., 2015: 121, fig. 2A ([not *Favartia (Favartia) roseotincta* Houart & Gori, 2011]).

Type material. Oman, Dhofar, Mirbat, Marriott Wreck, 18 m, lv, ad, holotype MNHN IM-2000-33185 (ex SG).

Paratypes: Oman, Dhofar, Mirbat, Marriott Wreck, 18 m, 3 lv, ad, SG; Oman, Dhofar, Mirbat, Marriott Wreck, 16°57' N, 54°44' E, 12 m, lv, ad, 1 SG; Oman, Dhofar, Mirbat, The Hill, 16°58' N, 54°41' E, 27 m, 1 lv, ad and 2 lv, sub, SG; Oman, Dhofar, East Mirbat, 32-36 m, 1 lv, juv, 1 lv, sub, 1 dd, ad, JR; Oman, Dhofar, East Mirbat, The Hill, 16°57' N, 54°42' E, 20-22 m, flat rocks and fine sand, 2 lv, ad, JR; Oman, Dhofar, Mirbat, Eagle Bay off shore, 20 m, 1 lv, ad, RH (ex SG).

Type locality. Oman, Dhofar, Mirbat, Marriott Wreck, 18 m.

Other material. Oman, Dhofar, Mirbat, east of Bird Island, 20 m, 1 dd, juv, SG; Oman, Dhofar, Mirbat, Deep Plateau, 16°56' N, 54°43' E, 32 m, 4 lv, juv, SG, syntopic with *F. roseotincta*; Oman, Dhofar, Mirbat, Bird Island, off shore, 16°56' N, 54°44' E, 25 m, 1 lv, juv, SG; Oman, Dhofar, Mirbat, Deep Wall, 16°57' N, 54°44' E, 20 m, 4 lv & dd, juv, SG; Oman, Dhofar, Mirbat, Deep Wall, 16°57' N, 54°44' E, 28 m, 1 lv, juv, SG; Oman, Dhofar, Mirbat, Deep Plateau, 16°57' N, 54°44' E, 35 m, 4 lv, juv, SG; Oman, Dhofar, Mirbat, Hamdy's Block, 15 m, 2 dd, ad, SG; Oman, Dhofar, Mirbat, Hamdy's Block, 20 m, 2 dd, ad, SG; Oman, Dhofar, Mirbat, Hamdy's Block, 16°57' N, 54°46' E, 25 m, 1 dd, sub, SG, syntopic with *F. roseotincta*; Oman, Dhofar, South Mirbat, 16°58' N, 54°41' E, 25 m, 5 dd, juv, SG, syntopic with *F. roseotincta*.

Distribution. Oman, Dhofar, Mirbat, living at 12-35 m.

Description. Shell small for the genus, up to 9.1 mm in length (paratype SG). Length/width ratio 1.8-2.0. Slender, narrowly ovate, lightly built, weakly squamous. Subsutural ramp broad, weakly sloping, slightly convex.

Shell orange or light tan, occasionally with darker coloured spire whorls and a few spines with darker tips; P1 and P2 occasionally lighter coloured. Aperture light orange or light tan within with a weakly lighter coloured band inside of apertural lip.

Spire high with 1.15-1.5 protoconch whorls and up to 5 strongly convex, shouldered, spinose and nodose teleoconch whorls. Suture impressed. Protoconch small, elongate, smooth. Maximum width 600 μm , height 700 μm . First whorl keeled adapically. Terminal lip delicate, thin, almost straight.

Axial sculpture of teleoconch whorls consisting of low, narrow, weakly nodose ribs and varices. First whorl with 7 or 8 ribs, second with 9 or 10, third and fourth with 9-12 ribs, last whorl with 5-8 irregularly placed varices, generally with a broader space between penultimate and last (apertural) varix. Crossing with spiral cords generates small, narrow, blunt, open spinelets, more obvious on apertural varix. Spiral sculpture of moderately high, rounded, narrow, weakly squamous, nodose primary cords, occasionally also a few narrow secondary cords. First teleoconch whorl with visible P1, P2 and P3; second to fourth whorls with visible IP, P1-P3, P3 partially covered by succeeding whorl. Last teleoconch whorl with adis, IP, P1-P6, ADP, MP, occasionally with secondary cords on convex part of whorl. IP narrow, P1-P5 broader, almost of same breadth, P6 very narrow or indistinct, ADP and MP broad. P1-P3 more broadly spaced than P4 and P5. Primary cords ending as short, broad, blunt, open spines on apertural varix.

Aperture moderately small, ovate. Columellar lip narrow, smooth, occasionally with a very weak, narrow knob abapically, rim partially erect, adherent adapically. Anal notch shallow, broad. Outer lip strongly erect, crenulate, with low, weak denticles within: D1 and D2 split but shallow or indistinct, D3 split, D4 split, D5, D6. Denticles increasing in strength abapically. Siphonal canal short, 18-20 % of total shell length, narrow, strongly dorsally bent at tip, narrowly open, with two short, open spinelets: MP and ADP, MP spine shorter.

Operculum not examined, dried inside the shell in some specimens. Radula unknown.

Remarks. *Favartia mikrostenos* n. sp. was wrongly illustrated as *F. roseotincta* Houart & Gori, 2011 by Houart et al. (2015: fig. 2A). Indeed, *F. roseotincta* (Fig. 7K-P) described from Masirah Island is close to *Favartia mikrostenos* n. sp. The protoconch morphology is almost similar in both species (Fig. 7P) but even young specimens of *F. roseotincta* with only 2 or 3 teleoconch whorls are still easy to separate from *F. mikrostenos* n. sp.

Favartia mikrostenos n. sp. has narrower, closer to each other primary spiral cords P1-P3, a conspicuous IP on a broad, convex, subsutural ramp, and occasionally secondary cords. The subsutural ramp in *F. roseotincta* is narrower, weakly concave or straight, lacks the IP spiral cord and there are no secondary cords between P1-P6. The axial ribs and varices in *F. mikrostenos* n. sp. are also narrower and lower and the spinelets are obviously smaller at the intersection of the spiral and axial sculpture.

Adult specimens of *F. mikrostenos* n. sp. differ from *F. roseotincta* by the same characters and also in having the last teleoconch whorl with a more broadly convex outline opposed to a more triangular whorl in *F. mikrostenos* n. sp.

Favartia mikrostenos n. sp. and *F. roseotincta* are sympatric and syntopic in three localities (see other material).

Favartia mikrostenos n. sp. is also similar, at least in size and form to *F. jeanae* Bertsch & D'Attilio, 1980 from the western Pacific Ocean (Fig. 7Q-R) but *F. mikrostenos* n. sp. differs in having a paucispiral, elongate and narrow protoconch, denoting lecithotrophic larval development, rather than a conical, multispiral protoconch of 3.5 convex whorls in *F. jeanae*, denoting planktotrophic larval development. *Favartia mikrostenos* n. sp. also differs in having lower, less conspicuous axial varices and smoother spiral cords, opposed to the strongly spirally grooved cords in *F. jeanae*.

Etymology. *Mikros* (G): small, and *stenos* (G): narrow, refers to the small and narrow shell.

Figure 5

A-J. *Aspella omanensis* n. sp.

A-C. Oman, Dhofar, Mirbat, The Hill, 16°58' N, 54°42' E, 20 m, 8.2 mm, holotype MNHN IM-2000-33182.

D. Protoconch (scale bar 500 μm); E-F. Oman, Mirbat, Dhofar, Hamdy's Block, 35 m, 8.2 mm, paratype SG; G-H. Oman, Dhofar, Mirbat, Mirbat Deep Wall, 28 m, 16°57' N, 54°44' E, juvenile, 5 mm, paratype RH; I. Intritacalx (scale bar 1 mm); J. Operculum (scale bar 1 mm).

K-M. *Aspella thomassini* Houart, 1985, Mauritius, 13.5 mm, RH; N. Protoconch of *Aspella hildrunae* Houart & Tröndlé, 2008, French Polynesia (scale bar 500 μm).

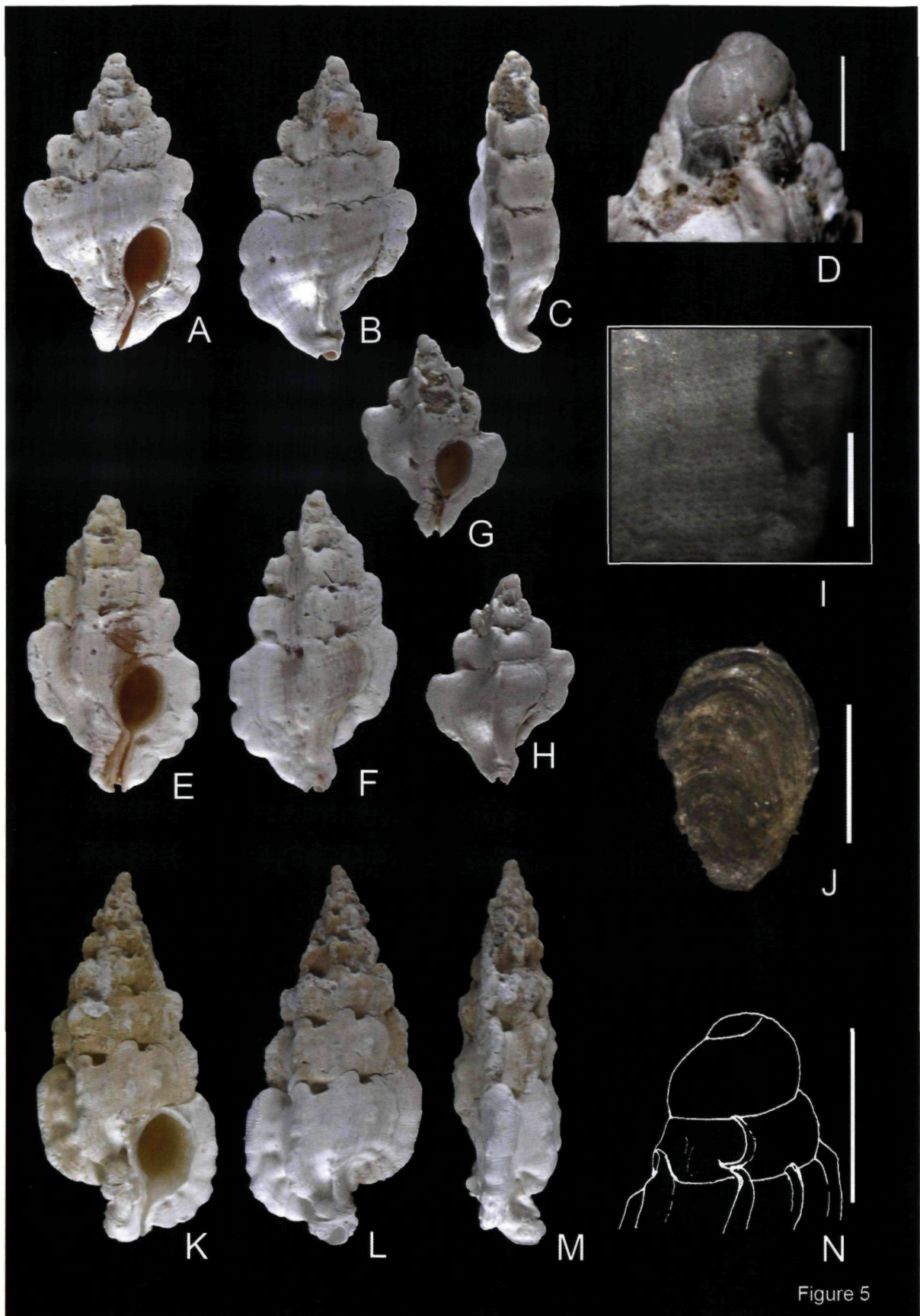


Figure 5

Subfamily **Typhinae** Cossmann, 1903

Genus **Monstrotyphis** Habe, 1961

Type species (by original designation): *Typhis* (*Typhinellus*) *tosaensis* Azuma, 1960, Japan.

Monstrotyphis Habe, 1961 differs from *Typhinellus* Jousseaume, 1880 in lacking a partition (an erect plate of shell matter connecting the shoulder spine flange to previous teleoconch whorls), in having webbed, usually frilled varices whose flanges do not extend farther than the adapical part of the siphonal canal and anal tubes nearer to preceding varix, as opposed to *Typhinellus* which has a partition and the variceal flange of last teleoconch whorl never frilled and extending almost to the tip of the siphonal canal. See *T. mirbatensis* (Fig. 13P-Q) for comparison. The anal tubes are adpressed to preceding varix.

Monstrotyphis was reviewed by Houart (2002) and includes currently 12 Indo-West Pacific extant species.

***Monstrotyphis goniodes* n. sp.**

Figs 4E; 8A-M

Type material. Oman, Dhofar, Mirbat, Deep Plateau, 16°56' N, 54°43' E, 32 m, lv, ad, holotype MNHN IM-2000-33186 (ex SG).

Paratypes: Oman, Dhofar, Mirbat, The Hill, 16°58' N, 54°41' E, 27 m, 1 lv, sub, SG; Oman, Dhofar, Mirbat, Hamdy's Block, 35 m, 1 lv, sub, SG; Oman, Dhofar, Mirbat, Deep Plateau, 16°56' N, 54°43' E, 32 m, 1 lv, ad, 2 lv, sub, paratypes JR; Oman, Dhofar, East Mirbat, sea side of Hamdy's Block, 16°57' N and 54°46' E, 32-35 m, flat rocks and fine sand, 1 lv, ad, JR; Oman, Dhofar, East Mirbat, Deep Plateau, 16°56' N, 54°43' E, flat rocks and fine sand, 28-32 m, 1 lv, ad, JR; Oman, Dhofar, Mirbat, Deep Plateau, 16°56' N, 54°43' E, 30 m, 2 lv, ad, SG; 1 lv, sub, RH.

Type locality. Oman, Dhofar, Mirbat, Deep Plateau, 16°56' N, 54°43' E, 32 m.

Distribution. Oman, Dhofar, Mirbat, living at 27-35 m.

Description. Shell small for the genus, up to 10.9 mm in length (paratype SG). Length/width ratio 1.8-2.0. Angulate, broadly ovate, lightly built. Subsutural ramp narrow, weakly sloping, tabulate, weakly concave.

Shell whitish or light tan, covered by white, thin, intritacalx. Subsutural ramp dark brown near suture. Aperture white.

Spire high with 1.75-2.0 protoconch whorls and teleoconch of 4 broad, angulate, strongly shouldered teleoconch whorls. Suture impressed. Protoconch relatively large, strongly keeled adapically. Maximum width and height 900 µm. Terminal lip shallow, delicate, strongly opisthocline. Axial sculpture of teleoconch whorls consisting of 4 high, narrow, lamellate, frilled varices from first to last whorl. Spiral sculpture of P1, narrow P2 giving rise to strongly upward curved spine on varices. P1 with a rounded, ventrally sealed anal tube, close to preceding varix, forming an angle of approximately 90° with the axis of shell. Apertural tube long, weakly tapered at its extremity. P2-P6 primary spiral cords indistinct on convex part of teleoconch whorl, ending as short, broad, blunt, open, webbed spinelets on varices, especially obvious on apertural varix, giving it a frilly appearance; s6 obvious as small, short, blunt, narrow spinelet between P6 and a broad projection on the siphonal canal, consisting of webbed ADP, MP and probably ABP.

Aperture relatively large, rounded, forming a continuous peristome. Columellar lip narrow, flaring, smooth. Outer lip strongly erect, smooth within. Siphonal canal long, 35-41 % of total shell length, broad, strongly dorsally bent at tip, ventrally sealed, with webbed ADP, MP and probably ABP spinelets, forming a wide, short projection.

Operculum light or dark brown, roundly ovate with apical nucleus and 10 or 11 concentric lamellae.

Radula unknown.

Figure 6

A-J. *Dermomurex trivaricosus* n. sp.

A-H. Oman, Dhofar, East Mirbat, 32-36 m.

A-C. 15.9 mm, holotype MNHN IM-2000-33183; D-E. 8 mm, paratype RH; F. Protoconch, paratype RH (scale bar 500 µm); G. Intritacalx, holotype (scale bar 500 µm); H. 13.2 mm, paratype SG; I-J. Oman, Dhofar, east Mirbat, deep Plateau, 28-32 m, 14.4 mm, paratype JR.

K. *Dermomurex trondleorum* Houart, 1990, French Polynesia, Tumaotu Archipelago, Anaa Atoll, 17 mm, holotype MNHN IM-2000-223 (photo MNHN); **L.** *Dermomurex tricolotae* Houart, 2001, New Caledonia, channel of Koumac pass, holotype MNHN-IM-2000-0340, 13.1 mm (photo MNHN); **M-N.** *Dermomurex fitialeatai* Houart, 2015, Papua New Guinea, north of Tadwai Island, outer slope, 22 m, holotype MNHN IM-2013-14300, 18.9 mm; N. Intritacalx (scale bar 1 mm).

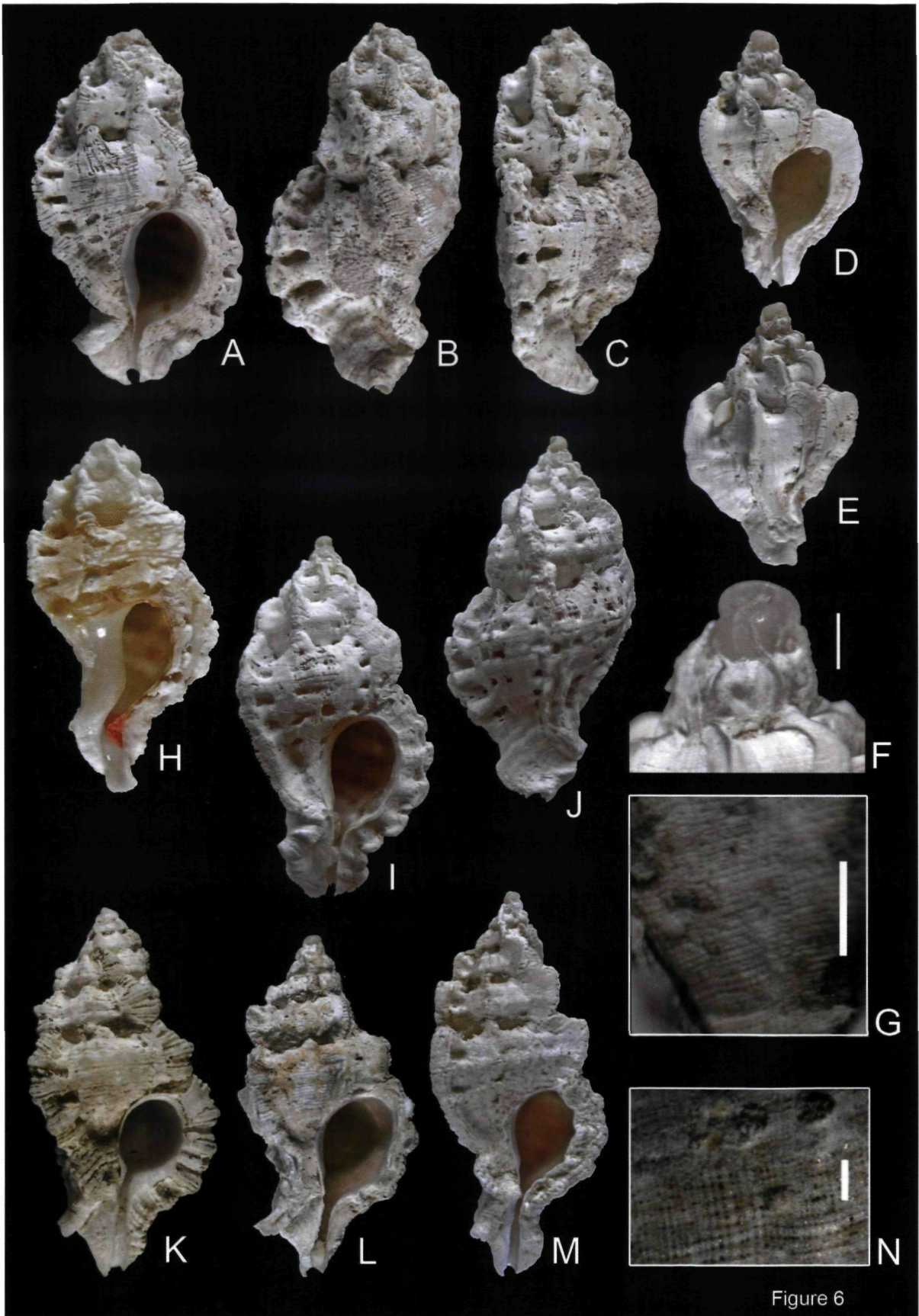


Figure 6

Remarks. Only one species of *Monstrotrophis*, *M. tangaroa* Houart & Marshall, 2015 (Fig. 9) has a tabulate, strongly adapically keeled protoconch as observed in *M. gonoides* n. sp., however, *M. tangaroa* differs in having a smooth, only weakly dorsally recurved siphonal canal, opposed to a comparatively longer, strongly abapically recurved canal in *M. gonoides* n. sp. with ADP, MP and ABP indistinct on canal but ending as short blunt, webbed spines.

The new species differs from the other Indo-West Pacific species with spines or webbed spines on the siphonal canal, namely *M. carolinae* (Houart, 1987) from New Caledonia, *M. imperialis* (Keen & Campbell, 1969), from Japan, *M. singularis* Houart, 2002, from New Caledonia, *M. tosaensis* (Azuma, 1960), from Japan and *M. yatesi* (Crosse & Fischer, 1865) from Australia in having a strongly keeled, large protoconch opposed to a rounded protoconch in *M. imperialis*, *M. tosaensis* and *M. yatesi* and in a few other different shell characters. Only *M. singularis* and *M. carolinae* have an adapically keeled protoconch, but in a much lesser degree than in *M. gonoides* n. sp. Furthermore *M. singularis* is a very small species, only reaching 7 mm in length for adults. The protoconch is also much smaller, more acute and minutely punctate. *M. carolinae* further differs in having a larger, more squamous, broader shell with a lower spire and a comparatively longer siphonal canal.

Etymology. *Gonoides* (G): angular, refers to the angulate shell, tabulate protoconch and subsutural ramp.

II. NEW RECORDS AND OTHER MATERIAL

Genus *Homalocantha* Mörch, 1852

Type species (by monotypy): *Murex scorpio* Linnaeus, 1758, Indo-West Pacific.

Homalocantha anatomica (Perry, 1811)
Figs 10A-I; 11A-I

Hexaplex anatomica Perry, 1811: pl. 8, fig. 2.

Type material. Unknown. None of Perry's types are known to be extant (Petit, 2003). When examining the types of Muricidae in NHMUK in the eighties one of us (RH) did not find any type material related to this species. However, the original illustration from Perry is excellent and leaves no doubt about its identification. Perry noted: "From a specimen in the Collection of Lord Valentia".

Material examined. Oman, Muscat, Jebel Sifah, First Entrance, 20 m, 2 lv, ad & sub, SG; Oman, Muscat, north and south of As-Sifah, dived 12-20 m, 2 lv, ad, JR.

Type locality. "A native of the East Indies".

Distribution. Indo-West Pacific.

Remarks. The senior author (RH) compared several specimens of *Homalocantha anatomica* collected in different localities in the Indo-West Pacific, with the holotype and other specimens of *H. fauroti* Jousseume, 1888 from the Red Sea, with other shells from the Gulf of Aqaba, Red Sea, described as *H. anatomica elatensis* Heiman & Mienis, 2009 and specimens from Oman (Figs 10A-C). The morphology of these shells is quite variable but extremely close to each other and we cannot reasonably separate the populations of the Red Sea and Oman from those of the other localities. Maybe genetic analyses will be of some help to clarify the possible synonymy, but we cannot separate them with shell morphology only. Bosch et al. (1995: 119-120) already reported that species from the Gulf of Oman.

Another species, *Homalocantha scorpio*, was illustrated by Bosch & Bosch (1982: 89) who noted that only empty shells were found along the beaches, but Bosch et al. (1995: 120) noted that "the shells illustrated by Bosch & Bosch, 1982: 89, said to be from Oman, cannot now be found. It has not been collected in Eastern Arabia since so confirmation of its presence there is required". We therefore consider the presence of this species in Oman as being very doubtful.

Figure 7

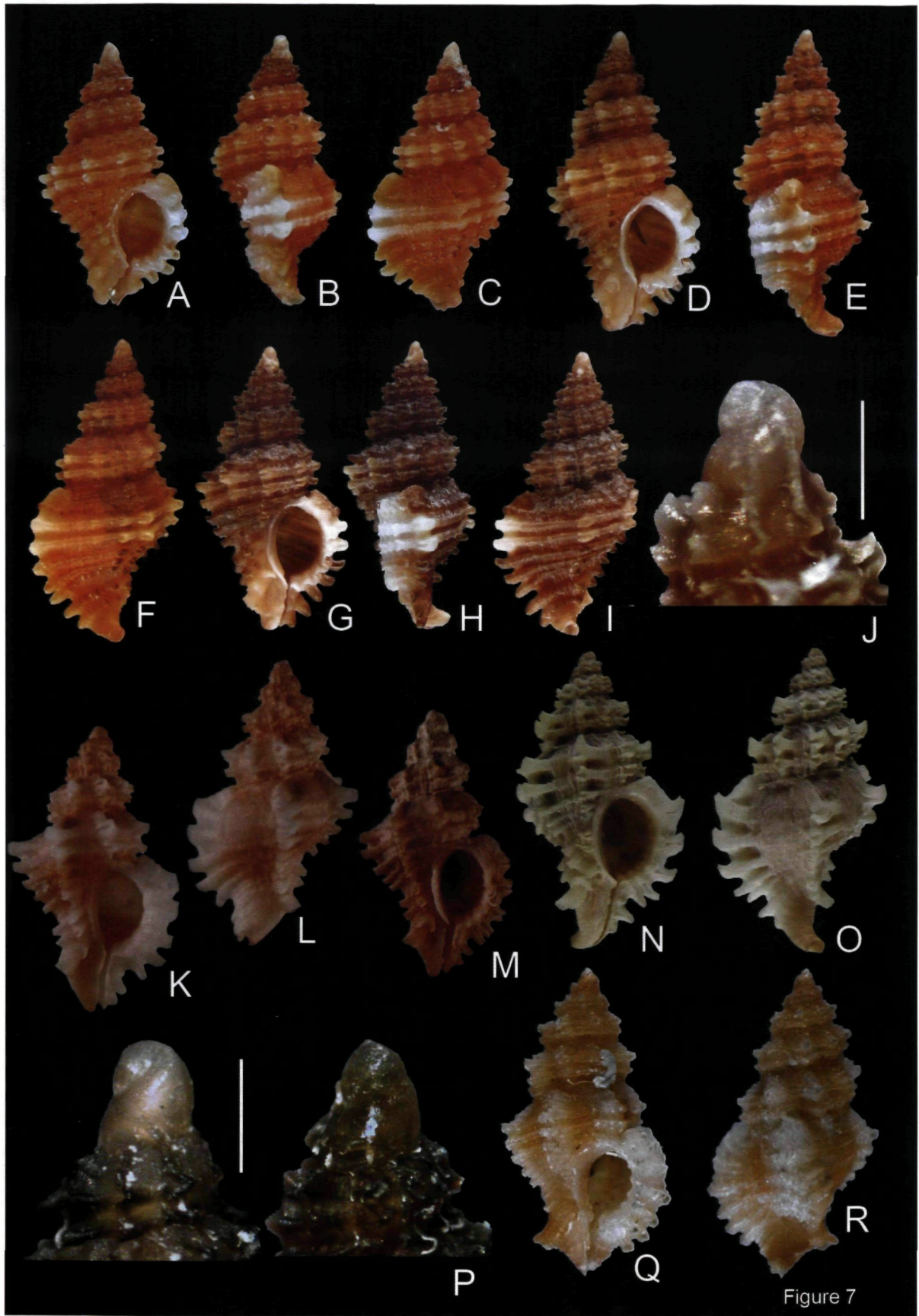
A-J. *Favartia mikrostenos* n. sp.

A-C. Oman, Dhofar, Mirbat, Marriott Wreck, 16-18 m, 8.2 mm, holotype MNHN IM-2000-33185; D-F. Oman, Dhofar, Mirbat, Marriott Wreck, 16-18 m, 9.2 mm, paratype SG; G-I. Oman, Dhofar, Mirbat, Eagle Bay offshore, 20 m, rocks brushing, paratype RH; J. Protoconch, Oman, Dhofar, Mirbat, Marriott Wreck, 16-18 m, paratype SG (scale bar 500 µm).

K-P. *Favartia roseotincta* Houart & Gori, 2011

K-L. Oman, Masitah, Ras Al Ya, 21 m, 8.3 mm, holotype MNHN-IM-2000-23205; M. Oman, Masitah, Ras Al Ya, 21 m, 8.2 mm, paratype SG; N-O. Oman, Dhofar, Mirbat, The Hill, 20 m, 8.9 mm, SG; P. Protoconch, Oman, Dhofar, Mirbat, The Hill, 20 m, SG (scale bar 500 µm).

Q-R. *Favartia jeanae* Bertsch & D'Attilio, 1980. Philippines, Cebu, RH, 9.1 mm.



Genus *Pteryomarchia* Houart, 1995

Type species (by original designation): *Murex tripterus* Born, 1778.

Pteryomarchia barclayana (H. Adams, 1873)

Fig. 12A-B

Coralliophila barclayanus H. Adams, 1873: 205, pl. 23, fig. 1.

Type material. Lectotype NHMUK 1878.1.28.25. Lectotype selection by inference of holotype in Cernohorsky, 1978: 76, fig. 22.

Material examined. Oman, Dhofar, East Mirbat, 1 lv, ad, JR.

Type locality. Mauritius.

Distribution. Indo-West Pacific.

Remarks. In the western Indian Ocean *P. barclayana* is reported in Mauritius (type locality), Mozambique (RH) and Zanzibar (RH). It was never recorded in Oman before.

Subfamily **Muricopsinae** Radwin & D'Attilio, 1971

Genus *Favartia* Jousseaume, 1880

Subgenus *Favartia* Jousseaume, 1880

Type species (by original designation): *Murex breviculus* Sowerby, 1834, Indo-West Pacific.

Favartia (Favartia) colombi Houart & Gori, 2011

Fig. 12C-J

Favartia (Favartia) colombi Houart & Gori, 2011: 40, figs 1, 2-6, 27.

Type material. Holotype IRSNB IG 31676/ MT 2316.

Material examined. Oman, Dhofar, Mirbat, Mirbat Deep Wall, 1 lv, sub, SG; Dhofar, Mirbat, Mirbat area, 12-20 m, 4 ad, sub & juv, lv & dd, JR; Dhofar, Mirbat, East Mirbat, 3 lv, ad & sub, JR; Dhofar, Mirbat, Hamdy's Block, 35 m, 1 lv, sub, SG; Dhofar, Mirbat, The Hill, 27 m, 1 lv, ad, SG; Dhofar, Mirbat, The Hill, 22-26 m, 2 lv, ad, JR; Dhofar, Mirbat, Marriott Wreck,

18 m, 1 lv, juv, SG; Al Wusta, Ras Madrakah Cape, 3-6 m, 1 lv, ad, JR.

Type locality. Oman, Masirah Island, Ras Al Ya, 20°29' N, 58°57' E, 21 m.

Distribution. Originally described from Masirah Island and North of Muscat, the species was also collected in Mirbat, Dhofar Governorate and in Al Wusta, Ras Madrakah (new localities).

Remarks. The new material examined consists of a few specimens with darker coloured shells, occasionally with a broader last teleoconch whorl, but the protoconch, spiral cord and axial morphology are similar to the typical form. No other differences than colour and width of last teleoconch whorl could be detected in the shell morphology. Moreover, the length and width ratio in both forms, measured with a digital caliper, is similar for a few specimens: 1.7 – 1.9 in *F. colombi* and 1.5 – 1.8 in the shells examined from the new material.

Favartia (Favartia) roseotincta Houart & Gori, 2011

Fig. 7K-P

Favartia (Favartia) roseotincta Houart & Gori, 2011: 41, figs 7-12, 30.

Type material. Holotype MNHN IM-2000-23205.

Material examined. Oman, Dhofar, Mirbat, Bird Island, offshore, 25 m, 1 dd, ad, SG; Dhofar, Mirbat, Mirbat Deep Wall, 28 m, 4 lv, ad & juv, SG; Dhofar, Mirbat, Mirbat Deep Wall, 20 m, 1 lv, juv, SG; Dhofar, Mirbat, Marriott Deep Wall, 20 m, 4 lv, ad, SG; Dhofar, Mirbat, Marriott Wreck, 18 m, 1 dd, ad, SG; Dhofar, Mirbat, Eagle Bay off shore, 20 m, 4 lv, ad, SG; Dhofar, south Mirbat, offshore, 25 m, 1 lv, juv, SG; Dhofar, Mirbat area, 12-20 m, 1 juv, lv, JR; Dhofar, East Mirbat, 32-36 m, 11 lv & dd, ad, sub & juv, RH; Dhofar, Mirbat, The Hill, 27 m, 5 lv, ad & sub, SG; Dhofar, Mirbat, The Hill, 20 m, 6 lv, ad, sub & juv, SG; Dhofar, Mirbat, Deep Plateau, 32 m, 4 lv, ad, SG, 1 lv, ad, RH; Dhofar, Mirbat, Deep plateau 26-32 m, 4 lv, ad, JR.

Type locality. Oman, Masirah, Ras Al Ya, 20°39'504" N, 58°52'138" E, 21 m.

Figure 8

A-M. *Monstrotyphis goniodes* n. sp.

A-C. Oman, Dhofar, Mirbat, Deep Plateau, 32 m, 16°56' N, 54°43' E, rocks brushing, 32 m, holotype MNHN IM-2000-33186, 9.5 mm; D-F. Oman, Dhofar, Mirbat, Deep Plateau, on flat rocks under a thin layer of sand, 16°56' N, 54°43' E, 30 m, paratype RH, 8.8 mm; G-H. Oman, Dhofar, Mirbat, Deep Plateau, 32 m, 16°56' N, 54°43' E, rocks brushing, 32 m, paratype JR, 10.1 mm; I-K. Oman, Dhofar, Mirbat, Deep Plateau, on flat rocks under a thin layer of sand, 16°56' N, 54°43' E, 30 m, paratype SG, 10 mm; L. Operculum of holotype (scale bar 500 µm); M. Protoconch, Oman, Dhofar, Mirbat, Hamdy's Block, rocks brushing, 35 m, paratype SG (scale bar 500 µm).



Figure 8

Distribution. Previously known from Rash Al Ya, Masirah Island, in 21 m, its geographical and bathymetrical distribution extend now to Mirbat, Dhofar Governorate, in 20–32 m (new locality).

Remarks

The shell was originally described as being pinkish white or light pink. The new examined material is

represented by greyish white specimens, darker coloured between axial and spiral sculpture while their length extends now to 9.0 mm (8.3 mm previously). All other shell characters are common to both colour forms.

Genus *Murexsul* Iredale, 1915

Type species (by original designation): *Murex octogonus* Quoy & Gaimard, 1833, New Zealand.

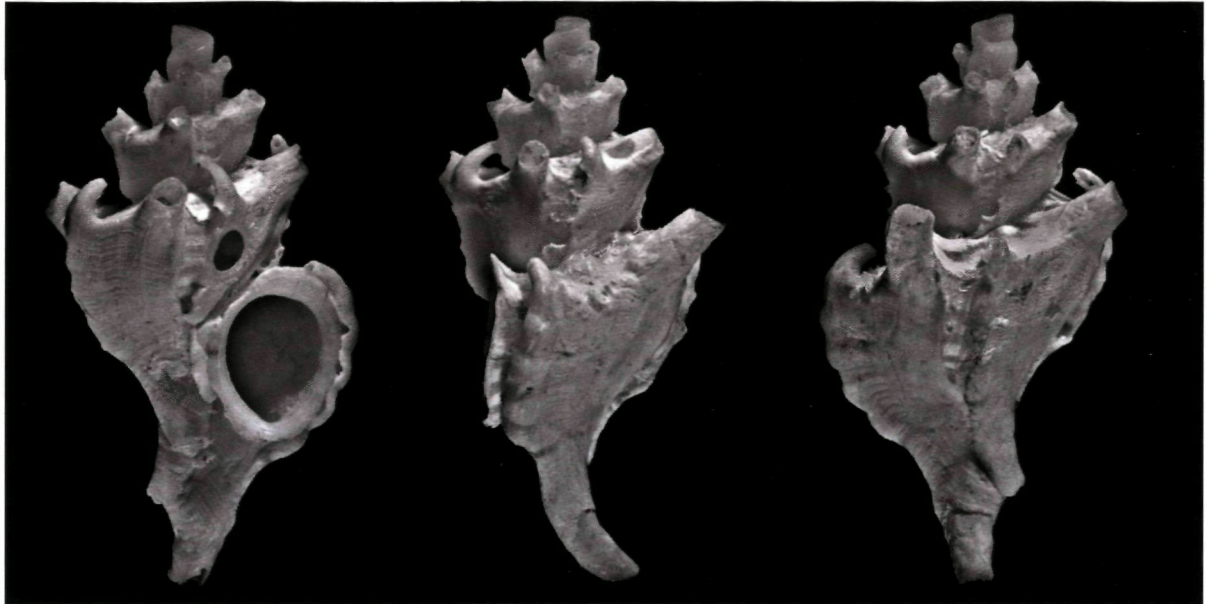


Figure 9. *Monstrotypis tangaroa* Houart & Marshall, 2015. North of Three Kings Islands, King Bank, New Zealand, 123–128 m, holotype M.148608, 7.9 mm (photo courtesy B.A. Marshall).

Murexsul khareefae Houart & Moolenbeek, 2012

Fig. 12 Q–T

Murexsul khareefae Houart & Moolenbeek, 2012: 81, figs 1–5.

Type material. Holotype ZMA Moll. 350106.

Material examined. Oman, Dhofar, Mirbat, east of Bird Island, 20 m, 1 lv, ad, SG; Dhofar, Mirbat, Mirbat Deep Wall, 20 m, 1 dd, ad, SG; Dhofar, East Mirbat, 32–36 m, 3 ad & sub, lv & dd, RH; Dhofar, south Mirbat, offshore, 25 m, 1 lv, sub, SG; Dhofar, Mirbat, The Hill, 20 m, 2 lv, ad & sub, RH; Dhofar, Mirbat, The Hill, 22–26 m, 4 lv, ad, JR; Dhofar, Mirbat, Hamdy's Block, 35 m, 3 lv & dd, ad, RH; Dhofar, Mirbat, Deep plateau 28–32 m, 2 lv, ad, JR; Dhofar, Mirbat, Deep Plateau, 32 m, 2 lv, juv, SG.

Type locality. Oman, province of Dhofar, “Knobby Point” (16°57.026' N, 54°49.109' E), 10–15 m.

Remarks. *Murexsul khareefae* was described from a single specimen but was sufficiently different from

other species so as to have no doubt about its validity. It is now also known from several additional specimens living close to the type locality.

Genus *Muricopsis* Bucquoy & Dautzenberg, 1882

Subgenus *Muricopsis* Bucquoy & Dautzenberg, 1882

Type species (by original designation): *Murex blainvillei* Payraudeau, 1826 (= *Murex cristatus* Brocchi, 1814), Mediterranean.

Muricopsis (Muricopsis) chiarae Bozzetti, 1991

Fig. 13A–E

Muricopsis chiarae Bozzetti, 1991: 44, figs 4–5.

Muricopsis chiarae — Houart et al., 2015: 121, fig. 3A–C.

Type material. Holotype MNHN-IM-2000-064.

Type locality. Somalia, Ras Hafun, 100–150 m (dd).

Distribution. Somalia and Oman.

Remarks. *Muricopsis chiarae* was already reported and illustrated from Oman by Houart et al. (2015) but

the protoconch consisting of 2 strongly adapically shouldered whorls (Fig. 13E) was not previously described nor illustrated. It was unknown in the original description.

Muricopsis (Muricopsis) omanensis
Smythe & Oliver, 1986
Fig. 13 F-G

Muricopsis omanensis Smythe & Oliver, 1986: 181, figs 1, 2.

Type material. Holotype NMW.Z.1985.043.1.

Material examined. Oman, Dhofar, Mirbat, The Hill, 20 m, 1 lv, juv, SG; Dhofar, Salalah, Al Baleed Beach, on the beach, 1 lv, ad, SG; Al Wusta, Ras Madrasah, 1 lv, JR; Al Wusta, Ras Madrasah, 1 lv, SG; Al Wusta, Ras Madrasah 3-5 m, 4 lv, ad, JR; Masirah Island, Ras Al Ya 6-10 m, 6 lv, ad, JR; Masirah Island, Ras Al Ya 16-17 m, 2 lv, ad, JR; 2 lv, sub, RH.

Type locality. Oman, Jazirat Shinzi, Masirah Island, 20°34' N, 50°58' E.

Distribution. Originally described from Masirah Island, this species was also collected in Mirbat, Dhofar, 16°57' N, 54°48' E (SG), Salalah, Al Baleed beach (SG) and Al Wusta, Ras Madrasah (JR and SG) (new localities).

Subfamily *Ergalataxinae* Kuroda & Habe, 1971

Genus *Ergalatax* Iredale, 1931
Type species (by original designation): *Ergalatax recurrens* Iredale, 1931 (= *Murex pauper* Watson, 1883), Australia and Ambon.

Ergalatax contracta (Reeve, 1846)
Fig. 13H

Buccinum contractum Reeve, 1846: pl. 8, fig. 53.

Type material. Three syntypes NHMUK 1984.10.3.

Material examined. Oman, Masirah, off Ras Al Ya, under flat rocks, together with *Colubraria cf. ceylonensis* (Sowerby, 1833) and *Conus lischkeanus tropicensis* Coomans & Filmer, 1985, in 2-25 m, 20+ lv (SG); East Mirbat, Dhofar, 4 lv, ad (RH, ex JR).

Type locality. Samar Island, Philippines.

Distribution. Indo-West Pacific.

Remarks. *Ergalatax contracta* is a common species widespread throughout the Indo-Pacific, including the

Red Sea. To our knowledge it was never reported from Oman.

Genus *Orania* Pallary, 1900
Type species (by original designation): *Pseudomurex spadae* Libassi, 1859 (= *Murex fusulus* Brocchi, 1814), Mediterranean eastern Atlantic.

Orania archaea Houart, 1995
Fig. 13M

Orania archaea Houart, 1995: 267, figs 22, 44, 127-132.

Type material. Holotype MNHN IM-2000-31.

Material examined. Oman, Dhofar, Mirbat, Deep Plateau, 16° 57' N, 54°44' E, 35 m, 1 lv, ad (SG).

Type locality. Samar, Philippines.

Distribution. Indo-West Pacific.

Remarks. *Orania archaea* is an uncommon species in the Philippines, the type locality, and in other Indo-West Pacific localities. It was not yet reported from Oman, however the identity of this single specimen remains somewhat doubtful because the protoconch could not be examined. *Orania archaea* has a typical conical and multispiral protoconch suggesting a planktotrophic larval development, what is certainly the reason of its wide geographical distribution. The presence of this species in Oman is thus not unexpected.

Genus *Pascula* Dall, 1908
Type species (by original designation): *Trophon citricus* Dall, 1908, Easter Island and French Polynesia.

Pascula darrosensis (E.A. Smith, 1884)
Fig. 13O

Murex (Ocinebra) darrosensis E.A. Smith, 1884: 429, pl. 44, fig. f.

Type material. Syntype NHMUK 1882.12.6.131.

Material examined. Oman, Dhofar, Mirbat, Deep Plateau, 16° 57' N, 54°44' E, 35 m, 1 lv, ad (SG).

Type locality. D'Arros Island, Amirantes.

Distribution. Indo-West Pacific.

Remarks. *Pascula darrosensis* is known from numerous localities in the Indo-West Pacific, from South Africa to the Red Sea, Australia, Japan and French Polynesia. It was never reported from Oman.

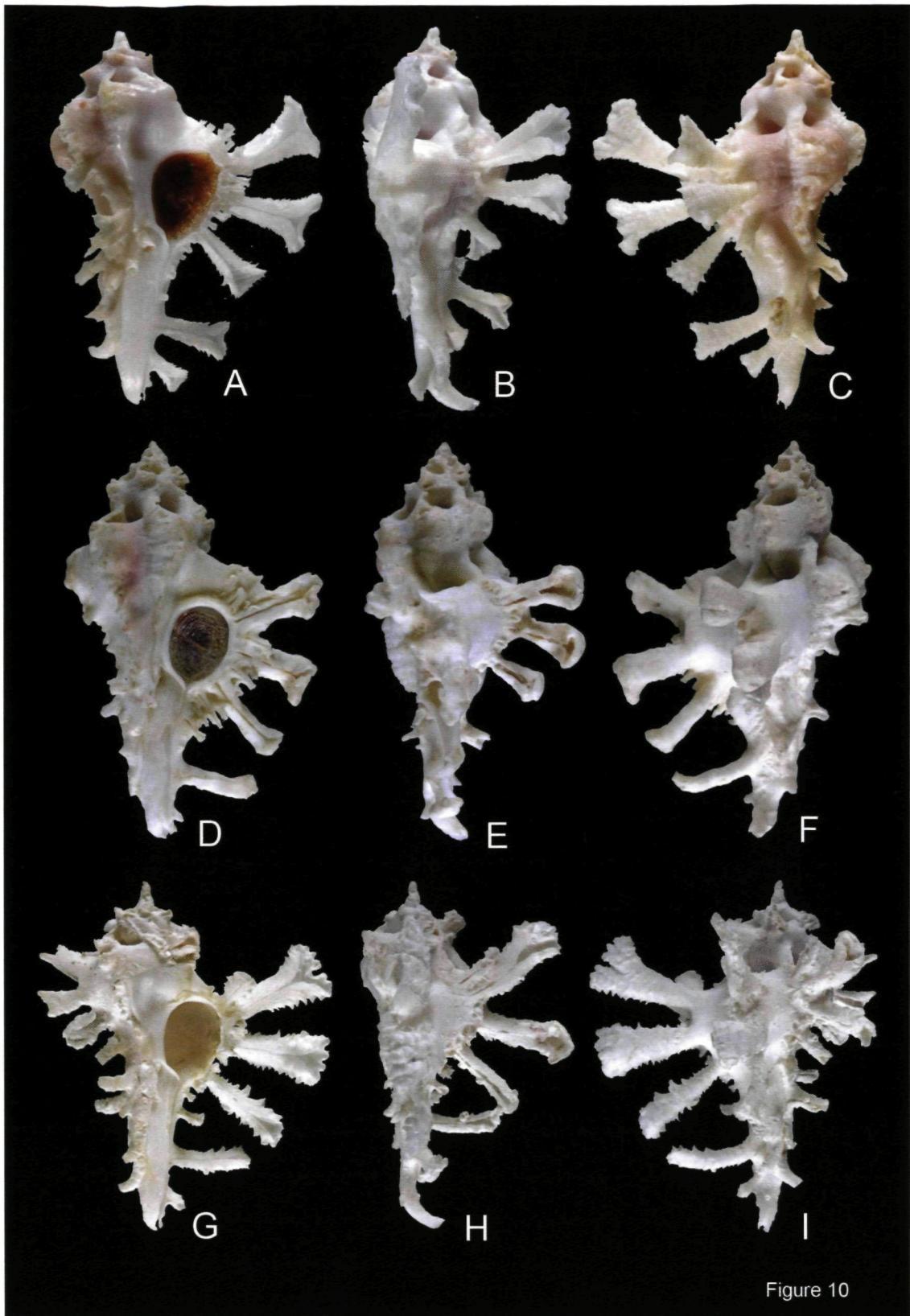


Figure 10

Figure 10

A-I. *Homalocantha anatomica* (Perry, 1811)

A-C. Oman, As-Sifah, 12-20 m, JR, 54.1 mm; D-F. Red Sea, Dahlak Archipelago, 3 m, RH, 60 mm; G-I. Red Sea, Gulf of Aqaba, Eilat, 6-12 m, RH, 42.5 mm.

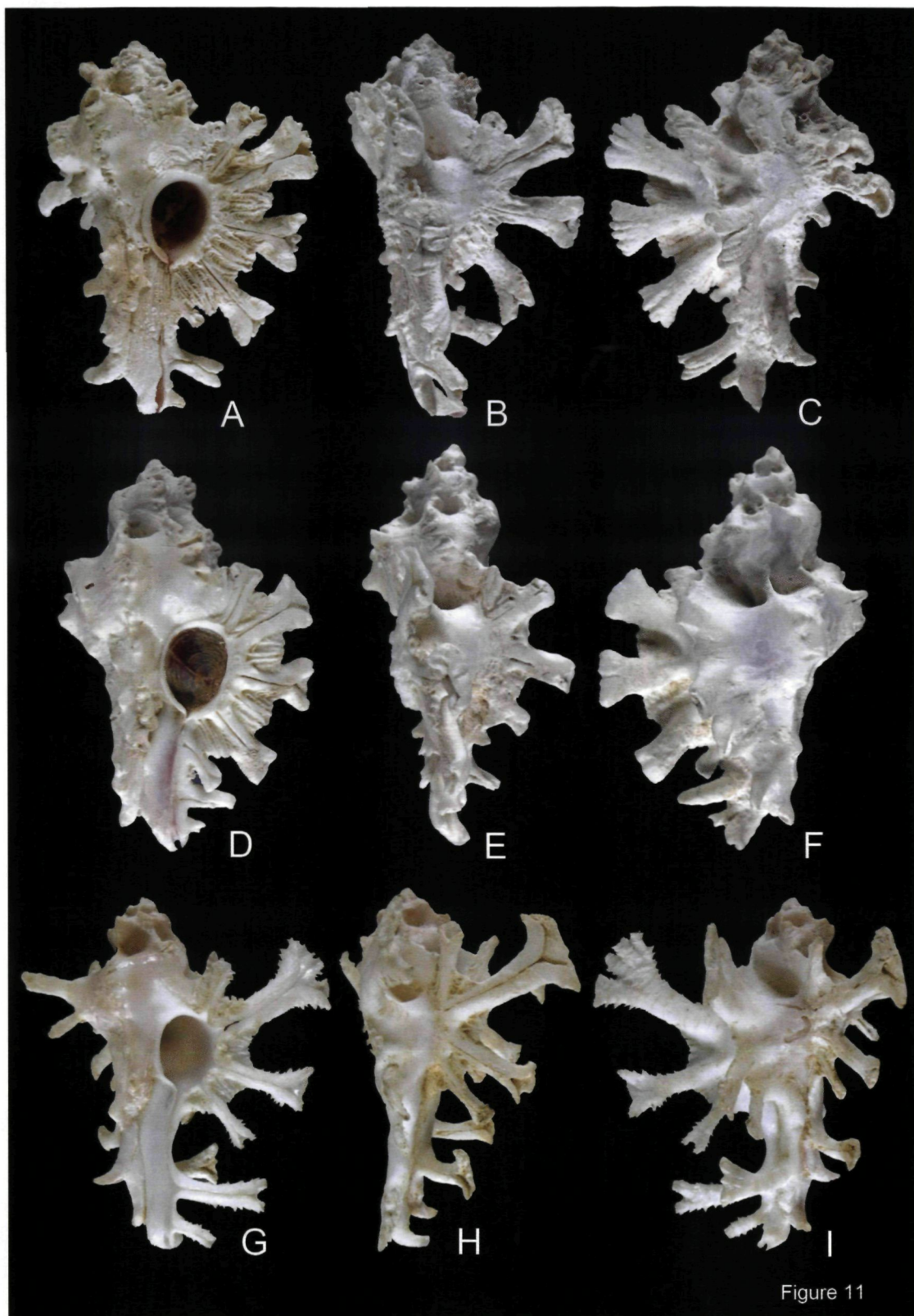


Figure 11

Figure 11

A-I. *Homalocantha anatomica* (Perry, 1811)

A-C. Red Sea, Gulf of Aqaba, Eilat, 4-8 m, RH, 58 mm; D-F. Red Sea, Dahlak Archipelago, 3 m, RH, 58.2 mm; G-I. Reunion, west coast, 18 m, RH, 46 mm.

Pascula ochrostoma (Blainville, 1832)

Fig. 13I-J

Purpura ochrostoma Blainville, 1832: 205.**Type material.** Holotype MNHN-IM-2000-155.**Material examined.** Oman, Dhofar, Mirbat, 12-16 m, 1 sub, 3 juv (JR); Oman, Dhofar, Mirbat, 16°58' N, 54°41' E, offshore, 20 m, 1 lv, ad (SG).**Type locality.** Tonga.**Distribution.** The distribution of *P. ochrostoma* is largely Indo-West Pacific. Occurrences in the western Indian Ocean are known from southern Mozambique to Somalia (all RH), but to our knowledge, not farther north. The presence of that species in Oman is a noteworthy range extension.**Remarks.** *Pascula ochrostoma* was reported from South Africa by Kilburn & Rippey (1982: 88, pl. 19, fig. 8) as *Cronia ochrostoma*, but the illustrated shell belongs to a similar, although different species, *Pascula muricata* (Reeve, 1846), also living throughout the Indo-West Pacific but not yet reported from Oman.Genus *Spinidrupa* Habe & Kosuge, 1966Type species (by original designation): *Murex euracantha* A. Adams, 1851, Indo-West Pacific.*Spinidrupa infans* (E. A. Smith, 1884)

Fig. 13K-L

Murex infans E. A. Smith, 1884: 491, pl. 44, fig. E.**Type material.** Lectotype NHMUK 1882.12.6.133. Lectotype selection by inference of holotype in Cernohorsky, 1976: 116, fig.21.**Type locality.** Amirantes, 13 fms.**Material examined.** Oman, Dhofar, Mirbat, 16°57' N, 54°48' E, 10 m, 1 lv, ad (SG); Oman, Dhofar, Mirbat, 16°56' N, 54°43' E, 30 m, 1 lv, ad (SG); Eagle Bay offshore, 20 m, 1 lv, ad (SG); Oman, Dhofar, Mirbat, Eagle Bay, 16°56' N, 54°48' E, 13 m, 1 lv, sub (SG); Oman, Dhofar, Mirbat,**Distribution.** From KwaZulu-Natal, South Africa, to Oman (new locality).**Remarks.** The geographical distribution of *Spinidrupa infans* is, to our knowledge, currently restricted to the western Indian Ocean. Records are known from Kwa-Zulu Natal in South Africa, Mozambique, Madagascar, Reunion, Tanzania, Zanzibar, Kenya, Amirantes (type locality) Seychelles, Somalia and the Gulf of Aden (all RH except Amirantes). Its distribution is now extended to Oman.Genus *Tenguella* Arakawa, 1965Type species (by original designation): *Purpura granulata* Duclos, 1832, Indo-West Pacific.*Tenguella hoffmani* Houart, 2017

Fig. 13N

Tenguella hoffmani Houart, 2017: 3, figs 2, 3, 5A-J.**Type material.** Oman, Ash Sharqiyah, Masirah Island, 20°35' N, 58°82' E, lv, ad, holotype ZMA.MOLL.90010.**Type locality.** Oman, Ash Sharqiyah, Masirah Island, 20°35' N, 58°82' E.**Figure 12****A-B.** *Pteryarchia barclayana* (H. Adams, 1873). Oman, Dhofar, East Mirbat, JR, 24.5 mm.**C-J.** *Favartia (Favartia) colombi* Houart & Gori, 2011

C-D. Oman, Masirah Island, Ras Al Ya, 20°29' N, 58°57' E, 21 m, holotype IRSNB IG 31676/ MT 2316, 15.6 mm; E-F. Oman, Dhofar, Mirbat area, south, 12-20 m, JR, 14.9 mm; G-I. Oman, Dhofar, East Mirbat, 32-36m, JR, 11.9 mm; J. Oman, Masirah, Ras Al Ya, 17 m, SG, 10.5 mm.

K-L. *Favartia (Favartia) flexirostris* (Melvill, 1898). Oman, Dhofar, Mirbat, Marriott Wreck, 12 m, SG, 8.1 mm.**M-N.** *Favartia (Pygmaepterys) dhofarensis* Houart, Gori & Rosado, 2015. Oman, Dhofar, Mirbat, paratype JR, 11.8 mm.**O-P.** *Favartia (Pygmaepterys) yemenensis* (Houart & Wranik, 1989). Oman, Masirah Island, Ras Al Ya, SG, 16.7 mm.**Q-T.** *Murexsul khareefae* Houart & Moolenbeek, 2012.

Q-R. Oman, Dhofar, "Knobby Point" (16°57.026' N, 54°49.109' E), 10-15 m, holotype ZMA Moll. 350106, 8.5 mm; S-T. Oman, Mirbat, "The Hill" 16°58' N, 54°42' E, 20 m, RH, 8.2 mm.

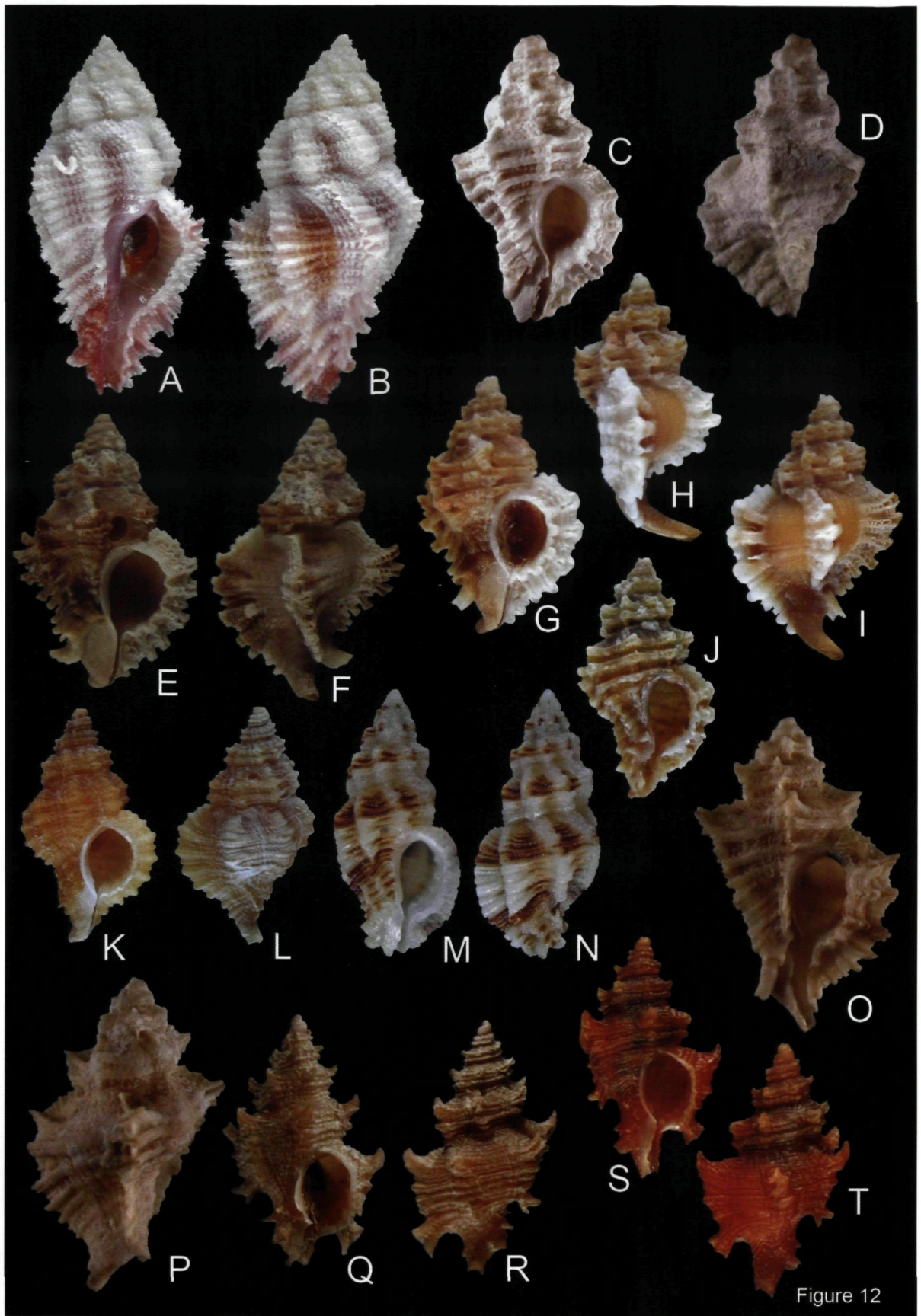


Figure 12

Material examined. Oman, Ash Sharqiyah, Masirah Island, 20°35' N, 58°82' E, 1v, ad, (holotype ZMA.MOLL.90010); Oman, Ash Sharqiyah, Masirah Island, 20°35' N, 58°82' E, 1lv, ad (paratype ZMA.MOLL.362910); Oman, Ash Sharqiyah, Masirah Island, NW coast, Ras Faydak, near electric power station by hand dredge, falling tide in surf zone, 9lv & dd, ad & sub (paratypes ZMA.MOLL.420482); Oman, Al Nakdah, near ferry to Masirah Island, in muddy sand with grass patches, 12lv & dd, ad, sub & juv (paratypes ZMA.MOLL.72670); Oman, Ash Sharqiyah, Masirah Island, Sur Masirah, beach, 1989, 4lv, juv (paratypes ZMA.MOLL.37313); Oman, Al Wusta, Khaluf, on rocks, intertidal, 1v, 2ad, 2sub (4 paratypes RH).

Oman, Ash Sharqiyah, Masirah Island, NW coast, Ras Faydak, near electric power station by hand dredge, falling tide in surf zone, 25lv & dd, ad & sub (ZMA.MOLL.72020); Oman, Ash Sharqiyah, Masirah Island, Sur Masirah, beach, 23lv & dd, juv & sub (ZMA.MOLL.362911); Oman, Ash Sharqiyah, Masirah Island, off Wadi Diyunayt, Hidden Reef, approximately 8-12 m, under rocks + sediment, by scuba, 3lv, sub (ZMA.MOLL.369664); Oman, Dhofar, Mirbat, Jazirat Hino, near Hino, under rocks, 9lv & dd, ad, sub & juv (ZMA.MOLL.60326); Oman, Muscat, Al Bustan, low tide under rocks, 2lv, ad (coll. Bart Van Heugten, the Netherlands); Oman, Muscat, Al Bustan, under rocks, intertidal, 1lv, juv (RH).

Distribution. Oman, from Mirbat, Dhofar, Ash Sharqiyah, Masirah Island, Al Wusta, Khaluf and Muscat, Al Bustan, intertidal, on rocks, to approximately 8-12 m.

Remarks. The genus *Tenguella* Arakawa, 1965 was synonymised with *Morula* Schumacher, 1817 by Houart (2004). However in Claremont et al. (2008) that genus, as used by Houart (2004), was proved to be polyphyletic. The available genus *Tenguella* was then resurrected to include its type species *Purpura*

granulata Duclos, 1832. Afterwards, Claremont et al. (2013) assigned four additional species to this genus: *T. ceylonica* (Dall, 1923), *T. marginalba* (Blainville, 1832), *T. musiva* (Kiener, 1835) and an additional apparently undescribed new species from Guam.

Only *Tenguella granulata* was recorded in Oman by Bosch & Bosch (1982: 95) and Bosch et al. (1995: 122, fig. 486) (as *Morula granulata*). However, Bosch et al. (1995: 122) also mentioned an "elongate form with more numerous nodules" but without the illustration of a specimen. This elongate form was described by Houart (2017: 3) as *Tenguella hoffmani*.

Tenguella hoffmani differs from *T. granulata* in having a more elongate, longer and narrower shell with a higher spire, a broader subsutural ramp, 9 or 11 axial ribs on the last teleoconch whorl in adult specimens as opposed to 7 or 8, occasionally 9 in *T. granulata*, a slightly broader aperture relative to the width of the shell with narrower denticles inside of the outer lip, compared to the generally strong, broad denticles in *T. granulata*, a straighter, smooth or less anteriorly folded columellar lip, with a less excavated parietal wall, narrower primary spiral cords and less obvious, usually smaller nodes at intersection of primary cords and axial ribs (in part from Houart, 2017).

Subfamily Typhinae Cossmann, 1903

Genus *Typhinellus* Jousseaume, 1880.

Type species (by original designation): *Typhis sowerbyi* Broderip, 1833 (= *Murex labiatus* Cristofori & Jan, 1832), Mediterranean, eastern Atlantic.

Typhinellus mirbatensis

Houart, Gori & Rosado, 2015

Fig. 13P-Q

Typhinellus mirbatensis Houart et al., 2015: 126, figs 2D-E, 3K-M, 6A-F.

Type material. Holotype MNHN IM-2000-30321.

Figure 13

A-E. *Muricopsis chiarae* Bozzetti, 1991

A-B. Somalia, Ras Hafun, 100-150 m, holotype MNHN IM-2000-064, 21.8 mm; C-E. Oman, Dhofar, East Mirbat, 32-36 m, JR, 15.7 mm; C. Protoconch (500 µm).

F-G. *Muricopsis omanensis* Smythe & Oliver, 1986. Oman, Ras Madrakah, JR, 24.5 mm.

H. *Ergalatax contracta* (Reeve, 1846), Oman, East Dhofar, Mirbat, JR, 24.5 mm.

I-J. *Pascuala ochrostoma* (Blainville, 1832), Oman, Dhofar, East Mirbat, 12-16 m, JR, 14.6 mm.

K-L. *Spinidrupa infans* (E.A. Smith, 1884), Oman, Dhofar, Mirbat, 10 m, SG, 14.1 mm.

M. *Orania archaea* Houart, 1995, Oman, Mirbat, Dhofar, Deep Plateau, Oman, 16° 57' N, 54°44' E, 35 m, SG, 12.3 mm.

N. *Tenguella hoffmani* Houart, 2017, Oman, Ash Sharqiyah, Masirah Island, 20°35' N, 58°82' E, holotype ZMA.MOLL.90010, 20.9 mm.

O. *Pascuala darrosensis* (E.A. Smith, 1884), Oman, Mirbat, Dhofar, Deep Plateau, Oman, 16° 57' N, 54°44' E, 35 m, SG, 8.5 mm.

P-Q. *Typhinellus mirbatensis* Houart, Gori & Rosado, 2015, Oman, Dhofar, Mirbat, Marriott Wreck, 12 m, SG, 14.4 mm.



Figure 13

Type locality. Oman, Dhofar, north of Mirbat, Marriott deep wall, 16°57' N, 54°44' E, 18-22 m.

Distribution. Only known from north of Mirbat, Dhofar Governorate, Oman.

Remarks. *Typhinellus mirbatensis* was originally compared with *T. amoenus* (Houart, 1994) from which it differs mainly in having a broader, strongly shouldered protoconch of 850 µm wide versus rounded and small, of 700 µm wide in *T. amoenus*. *T. mirbatensis* also has a more strongly shouldered, weakly narrower and more strongly constricted last teleoconch whorl and very shallow spiral cords while narrow and more obvious in *T. amoenus*. It was also compared with *T. androyensis* Bozzetti, 2007 from Madagascar but differs in having a broader, more strongly shouldered last teleoconch whorl and narrower spire whorls, a more strongly constricted and stouter last teleoconch whorl and a broader, strongly shouldered protoconch which is 850 µm wide versus rounded and 650 µm wide in *T. androyensis*.

Typhinellus mirbatensis was the first species of Typhininae reported from Oman.

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Table 1. List of Muricidae occurring in Oman

| MURICINAE | | |
|---|--|---|
| SPECIES | as: | REFERENCE |
| <i>Aspella omanensis</i> n. sp. | | This paper |
| <i>Aspella producta</i> (Pease, 1868) | <i>Aspella producta</i> | Bosch et al., 1995: 113, fig. 452 |
| <i>Dermomurex trivariocosus</i> n. sp. | | This paper |
| <i>Chicoreus</i> (<i>Chicoreus</i>) <i>ramosus</i> (Linnaeus, 1758) | <i>Chicoreus ramosus</i> | Bosch & Bosch, 1982: 89 Bosch et al., 1995: 115, fig. 456 |
| <i>Chicoreus</i> (<i>Triplex</i>) <i>axicornis</i> (Lamarck, 1822) | <i>Chicoreus axicornis</i> | Bosch et al., 1995: 113, fig. 453 |
| <i>Chicoreus</i> (<i>Triplex</i>) <i>bourguignati</i> (Poirier, 1883) | <i>Chicoreus banksii</i> | Bosch et al., 1995: 113, fig. 454 [(not <i>Chicoreus banksii</i> (Sowerby, 1841)] |
| <i>Chicoreus</i> (<i>Triplex</i>) <i>brunneus</i> (Link, 1807) | <i>Chicoreus brunneus</i> | Bosch et al., 1995: 113, fig. 455 |
| <i>Haustellum longicaudum</i> (Baker, 1891) | <i>Murex haustellum</i> | Bosch & Bosch, 1982: 88 [(not <i>Haustellum haustellum</i> (Linnaeus, 1758)] |
| | <i>Haustellum haustellum longicaudus</i> | Bosch et al., 1995: 115, fig. 458 |
| <i>Hexaplex kuesterianus</i> (Tapparone Canefri, 1875) | <i>Hexaplex kuesterianus</i> | Bosch & Bosch, 1982: 90 Bosch et al., 1995: 116, fig. 460 |
| <i>Hexaplex rileyi</i> D'Attilio & Myers, 1984 | <i>Hexaplex rileyi</i> D'Attilio & Myers, 1984 | Bosch et al., 1995: 116, fig. 461 |
| <i>Homalocantha anatomica</i> (Perry, 1811) | <i>Homalocantha anatomica</i> | Bosch et al., 1995: 119, fig. 473 |
| | <i>Homalocantha fauroti</i> (Jousseume, 1888) | Bosch et al., 1995: 120, fig. 474 |
| <i>Murex carbonnieri</i> Jousseume, 1881 | <i>Murex carbonnieri</i> | Ponder & Vokes, 1988: 22 Bosch et al., 1995: 117, fig. 463 |
| <i>Murex echinodes</i> Houart, 2011 | <i>Murex scolopax</i> | Bosch & Bosch, 1982: 90 Bosch et al., 1995: 117, fig. 465 (not <i>Murex scolopax</i> Dillwyn, 1817) |
| <i>Murex tenuirostrum</i> (Lamarck, 1822) | <i>Murex tenuirostrum</i> | Ponder & Vokes, 1988: 24 Bosch et al., 1995: 118, fig. 466 |
| <i>Naquetia cumingii</i> (A. Adams, 1853) | <i>Naquetia cumingii</i> | Bosch et al., 1995: 118, fig. 467 |
| <i>Pterymarchia barclayana</i> (H. Adams, 1873) | (new record for Oman) (JR) | |
| <i>Pterynotus albobrunneus</i> D'Attilio & Bertsch, 1980 | <i>Pterynotus albobrunneus</i> | Bosch & Bosch, 1982: 89 Bosch et al., 1995: 118, fig. 468 |
| <i>Pterynotus elongatus</i> (Lightfoot, 1786) | <i>Pterynotus elongatus</i> | Bosch et al., 1995: 119, fig. 469 |
| <i>Vokesimurex dolichourus</i> (Ponder & Vokes, 1988) | <i>Haustellum dolichourus</i> | Ponder & Vokes, 1988: 105 Bosch et al., 1995: 115, fig. 457 |

| | | |
|---|-------------------------------|---|
| <i>Vokesimurex malabaricus</i> (E.A. Smith, 1894) | <i>Haustellum malabaricus</i> | Ponder & Vokes, 1988: 112 Bosch & Bosch, 1982: 89 Bosch et al., 1995: 115, fig. 459 |
|---|-------------------------------|---|

MURICOPSINAE

| | | |
|--|--|--|
| <i>Favartia (Favartia) colombi</i> Houart & Gori, 2011 | <i>Pygmaepterys yemensis</i> | Bosch et al., 1995: 120, fig. 478 [not <i>Favartia (Pygmaepterys) yemensis</i> (Houart & Wranik, 1989)] |
| <i>Favartia (Favartia) cyclostoma</i> (Sowerby, 1841) | <i>Favartia cyclostoma</i> | Bosch et al., 1995: 119, fig. 470 |
| <i>Favartia (Favartia) flexirostris</i> (Melvill, 1898) (Fig. 12K-L) | <i>Favartia (F.) flexirostris</i> | Houart & Gori, 2011: fig. 20 |
| <i>Favartia (Favartia) mikrostenos</i> n. sp. | | This paper |
| <i>Favartia (Favartia) paulboschi</i> Smythe & Houart, 1984 | <i>Favartia paulboschi</i> | Bosch et al., 1995: 119, fig. 472 |
| <i>Favartia (Favartia) roseotincta</i> Houart & Gori, 2011 | <i>Favartia (Favartia) roseotincta</i> | Houart & Gori, 2001: 41, figs 7-12, 30 |
| <i>Favartia (Pygmaepterys) dhofarensis</i> Houart, Gori & Rosado, 2015 (Fig. 12M-N) | <i>Favartia (Pygmaepterys) dhofarensis</i> | Houart et al., 2015: 124, figs 2B-C, 3D-J |
| <i>Favartia (Pygmaepterys) yemenensis</i> (Houart & Wranik, 1989) (Fig. 12O-P) | <i>Favartia (Favartia) yemenensis</i> | Houart & Gori, 2011: figs 18 & 29 |
| <i>Murexsul khareefae</i> Houart & Moolenbeek, 2012 | <i>Murexsul khareefae</i> | Houart & Moolenbeek, 2012: 81, figs 1-5 |
| <i>Muricopsis chiarae</i> Bozzetti, 1991 | <i>Muricopsis chiarae</i> | Houart et al., 2015: fig. 3A-C |
| <i>Muricopsis omanensis</i> Smythe & Oliver, 1986 | <i>Muricopsis omanensis</i> | Bosch et al., 1995: 120, fig. 477 |

ERGALATAXINAE

| | | |
|--|--|---|
| <i>Drupella cornus</i> (Röding, 1798) | <i>Drupella cornus</i> | Bosch et al., 1995: 121, fig. 483 |
| <i>Drupella margariticola</i> (Broderip, 1833) | <i>Cronia cf. margariticola</i> | Bosch et al., 1995: 121, fig. 481 |
| <i>Ergalatax contracta</i> (Reeve, 1846) | New record for Oman (JR& SG) | |
| <i>Ergalatax junionae</i> Houart, 2008 | <i>Cronia konkanensis</i> <i>Cronia cf. konkanensis</i> | Bosch & Bosch, 1982: 95 Bosch et al., 1995: 121, fig. 480 [not <i>Semiricinula konkanensis</i> (Melvill, 1893)] |
| <i>Maculotriron serriale</i> (Deshayes, 1834) | <i>Maculotriron serriale</i> | Bosch et al., 1995: 121, fig. 482 |
| <i>Morulaanaxares</i> (Kiener, 1835) | <i>Morulaanaxares</i> | Bosch et al., 1995: 122, fig. 484 |
| <i>Orania archaea</i> Houart, 1995 | New record for Oman (SG) | |
| <i>Orania serotina</i> (A. Adams, 1853) | <i>Ocinebrina xuthedra</i> | Bosch et al., 1995: 121, fig. 479 [not <i>Orania xuthedra</i> (Melvill, 1893)] |
| <i>Pascula darrosensis</i> (E.A. Smith, 1884) | New record for Oman (SG) | |

| | | |
|--|--|--|
| <i>Pascula ochrostoma</i> (Blainville, 1832) | New record for Oman (JR) | |
| <i>Spinidrupa infans</i> (E.A. Smith, 1884) | New record for Oman (SG) | |
| <i>Tenguella granulata</i> (Duclos, 1832) | <i>Morula granulata</i> | Bosch & Bosch, 1982: 95 Bosch et al., 1995: 122, fig. 486 |
| <i>Tenguella hoffmani</i> Houart, 2017 | <i>Tenguella hoffmani</i> Houart, 2017: 3, figs 2, 3, 5A-J | |

RAPANINAE

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| <i>Purpura bufo</i> Lamarck, 1822 | <i>Thais bufo</i> | Bosch & Bosch, 1982: 91 Bosch et al., 1995: 123, fig. 490 |
| <i>Menathais bimaculata</i> (Jonas, 1845) | <i>Thais bimaculatus</i> | Bosch & Bosch, 1982: 91 Bosch et al., 1995: 123, fig. 489 |
| <i>Mancinella alouina</i> (Röding, 1798) | <i>Thais mancinella</i> <i>Thais (Mancinella) alouina</i> | Bosch & Bosch, 1982: 92 Bosch et al., 1995: 124, fig. 495 |
| <i>Indothais lacera</i> (Born, 1778) | <i>Thais mutabilis</i> (Link, 1807) <i>Thais lacera</i> | Bosch & Bosch, 1982: 92 Bosch et al., 1995: 123, fig. 491 |
| <i>Indothais sacellum</i> (Gmelin, 1791) | <i>Thais rugosa</i> (Born, 1778) Not <i>Murex rugosa</i> Born, 1778 [= <i>Drupella rugosa</i> (Born, 1778)] (<i>Murex rugosa</i> Born, 1780 = <i>Indothais sacellum</i>) | Bosch & Bosch, 1982: 93 Bosch et al., 1995: 123, fig. 492 |
| <i>Thalessa savignyi</i> (Deshayes, 1844) | <i>Thais savignyi</i> | Bosch & Bosch, 1982: 93 Bosch et al., 1995: 123, fig. 493 |
| <i>Semiricinula chrysostoma</i> (Deshayes, 1844) | <i>Morula chrysostoma</i> | Bosch & Bosch, 1982: 95 Bosch et al., 1995: 122, fig. 485 |
| <i>Semiricinula tissoti</i> (Petit de la Saussaye, 1852) | <i>Thais tissoti</i> | Bosch & Bosch, 1982: 93 Bosch et al., 1995: 123, fig. 494 |
| <i>Nassa francolina</i> (Bruguière, 1789) | <i>Nassa francolina</i> | Bosch & Bosch, 1982: 94 |
| <i>Nassa situla</i> (Reeve, 1846) | <i>Nassa situla</i> | Bosch et al., 1995: 122, fig. 487 |
| <i>Vexilla vexillum</i> (Gmelin, 1791) | <i>Vexilla vexillum</i> | Bosch & Bosch, 1982: 94 Bosch et al., 1995: 124, fig. 496 |
| <i>Purpura persica</i> (Linnaeus, 1758) | <i>Purpura rudolphi</i> Lamarck, 1822 <i>Purpura panama</i> Röding, 1798 | Bosch & Bosch, 1982: 89 Bosch et al., 1995: 122, fig. 488 |
| <i>Rapana rapiformis</i> (Born, 1778) | <i>Rapana bulbosa</i> Solander, 1817 <i>Rapana rapiformis</i> | Bosch & Bosch, 1982: 89 Bosch et al., 1995: 124, fig. 497 |
| <i>Rapana venosa</i> (Valenciennes, 1846) | <i>Rapana venosa</i> | Bosch et al., 1995: 124, fig. 498 |

TYPHINAE

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| <i>Monstrotyphis goniodes</i> n. sp. | This paper | |
| <i>Typhinellus mirbatensis</i> Houart, Gori & Rosado, 2015 | <i>Typhinellus mirbatensis</i> Houart et al., 2015: 126, figs 2D-E, 3K-M, 6A-F | |

CORALLIOPHILINAE

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|---|-----------------------------|-----------------------------------|
| <i>Babelomurex princeps</i> (Melvill, 1912) | <i>Babelomurex princeps</i> | Bosch et al., 1995: 125, fig. 499 |
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|---|---|--|
| <i>Coralliophila costularis</i> (Lamarck, 1816) | <i>Coralliophila costularis</i> | Bosch & Bosch, 1982: 97 Bosch et al., 1995: 125, fig. 500 |
| <i>Coralliophila erosa</i> (Röding, 1798) | <i>Coralliophila erosa</i> | Bosch & Bosch, 1982: 97 |
| <i>Coralliophila monodonta</i> (Blainville, 1832) | <i>Coralliophila madreporara</i> | Bosch et al., 1995: 125, fig. 501 |
| <i>Coralliophila persica</i> (Melvill, 1897) | <i>Coralliophila persica</i> | Bosch et al., 1995: 125, fig. 503 |
| <i>Coralliophila radula</i> (A. Adams, 1855) | <i>Coralliophila radula</i> | Bosch et al., 1995: 125, fig. 504 |
| <i>Coralliophila rubrococcinea</i> Melvill & Standen, 1855 | <i>Coralliophila rubrococcinea</i> | Bosch et al., 1995: 125, fig. 505 |
| <i>Coralliophila squamosissima</i> (E.A. Smith, 1876) | <i>Coralliophila squamosissima</i> | Bosch et al., 1995: 125, fig. 506 |
| <i>Coralliophilla violacea</i> (Kiener, 1835) | <i>Coralliophila neritoidea</i> (Lamarck, 1822) | Bosch & Bosch, 1982: 97 Bosch et al., 1995: 125, fig. 508 |
| <i>Magilus antiquus</i> Montfort, 1810 | <i>Magilus antiquus</i> | Bosch et al., 1995: 126, fig. 507 |
| <i>Mipus gyratus</i> (Hinds, 1844) | <i>Coralliophila gyrata</i> <i>Mipus gyratus</i> | Bosch & Bosch, 1982: 96 Bosch et al., 1995: 126, fig. 508 |
| <i>Mipus</i> cf. <i>rosaceus</i> (E.A. Smith, 1903) | <i>Mipus</i> cf. <i>rosaceus</i> | Bosch et al., 1995: 126, fig. 509 |