

A new *Favartia* species (Gastropoda: Muricidae: Muricopsinae) from Ecuador, Galapagos Islands

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A new species assigned to *Favartia* Jousseaume, 1880 is described from Isabela Island in the Galapagos Archipelago and compared with two related species. The eight *Favartia* species living in this area are listed, referenced and illustrated.

Keywords: Muricidae, Galapagos Islands, *Favartia*, new species

INTRODUCTION

The Galapagos Islands are situated some 970 km from the west coast of South America. The molluscan fauna is represented there by Panamic and Indo-Pacific species with a very large representation of Panamic and also Californian and Peruvian taxa (Hickman & Finet, 1999) but with only about 4% with Indo-Pacific affinities. Of those, some 15 to 20% are endemic to the islands. Finet (1994) listed 718 species considered of verified occurrence in the Galapagos of which about 20% were considered endemic. Kaiser (1997) listed some 846 intertidal to deep water species of which 125 were endemic taxa.

Currently there are eight species of *Favartia* that have been recorded as living in the Galapagos Islands by several authors. Two, *F. purdyae* and *F. radwini*, were originally described from these islands and one, *F. radwini*, is endemic.

They are:

- *Favartia exigua* (Broderip, 1833) (Fig. 2A–C).

Murexiella venustula Poorman, 1983, described from the Galápagos, Isla Santa Cruz, is a junior synonym.

In Kaicher (1978) as *Murexiella vittata*; Poorman (1983) as *Murexiella venustula* n. sp.; Finet (1994); Kaiser (1997) as *Murexiella venustula* Poorman, 1983; Hickman & Finet (1999); Myers (2003).

- *Favartia humilis* (Broderip, 1833) (Fig. 1E–H, M).

In Radwin & D'Attilio (1976); Finet (1994); Kaiser (1997); Myers (2003).

- *Favartia incisa* (Broderip, 1833) (Fig. 2D–E).

In Keen (1971); Kaicher (1974); Radwin & D'Attilio (1976); Finet (1994); Kaiser (1997); Myers (2003).

- *Favartia lappa* (Broderip, 1833) (Fig. 2F–H).

In Finet (1994); Hertz (1996); Kaiser (1997); Myers (2003).

- *Favartia perita* (Hinds, 1844) (Fig. 2I–D).

In Finet (1994); Kaiser (1997); Myers (2003).

- *Favartia purdyae* Vokes & D'Attilio, 1980 (Fig. 2K–M).

In Vokes & D'Attilio (1980); Finet (1994); Kaiser (1997); Hickman & Finet (1999); Myers (2003).
Type locality: Galapagos Islands, Plasa Island.

- *Favartia radwini* (Emerson & D'Attilio, 1970) (Fig. 2N–P).
In Emerson & D'Attilio (1970); Keen (1971); Finet (1994); Kaiser (1997); Myers (2003).
Type locality: Galapagos Islands, Isabela Island. An apparently endemic species.

- *Favartia vittata* (Broderip, 1833) (Fig. 2Q–R).
In Keen (1971); Fair (1976); Kaiser (1997); Myers (2003).

A ninth species, also probably endemic is here described from Isabela Island and compared with *F. humilis* and *F. keenae*.

All are illustrated here, four with Panamic specimens as there was no other material available and five from the Galapagos Islands.

Abbreviations

Depository

AMNH: American Museum of Natural History, New York, U.S.A.

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

RH: Collection of the author.

SBMNH: Santa Barbara Museum of Natural History, California, U.S.A.

Terminology used to describe the spiral cords (after Merle 2001, 2005) (Fig. 1M–N).

ab: abapical (or abapertural); **ad**: adapical (or adapertural).

Subsutural area (between the suture and the P1 shoulder cord)

adis: Adapical infrasutural secondary cord; **IP**: Infrasutural primary cord

Convex part of teleoconch whorl and siphonal canal

ABP: abapertural primary cord on the siphonal canal; **ADP**: adapertural primary cord on the siphonal canal; **ads**: adapertural secondary spiral cord on the siphonal canal; **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.

SYSTEMATICS

Family **MURICIDAE** Rafinesque, 1815

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

Genus *Favartia* Jousseaume, 1880

Type species by original designation: *Murex breviculus* G.B. Sowerby II, 1834, Indo-West Pacific.

Favartia kanneri n. sp.

Figs 1A–D, M; 3

Type material. — **Holotype MNHN-IM-2000-36519.**

Type locality. — Galapagos Islands, Isabela Island, Urvina Bay, in rubble, at base of reef.

Description. — Shell large for the genus, 35.0 mm in length. Length/width ratio 1.2. Broadly biconical, heavy, spinose. Subsutural ramp broad, weakly sloping, weakly concave.

Shell uniformly white with glossy white aperture.

Spire moderately high with eroded protoconch and 6 broad, strongly shouldered, spinose whorls.

Suture of whorls impressed.

Axial sculpture of teleoconch whorls consisting of high, broad, spinose varices. Each varix with long, blunt, ventrally sealed primary spines. Shoulder spine longest and broadest. First teleoconch whorl eroded, second to fourth with 6 varices, fifth and last with 7 varices. Spiral sculpture of high, rounded, broad, primary cords and additional very worn spiral threads over whole surface. Second to fifth whorl with visible P1 and P2, starting IP from third whorl on and adis from fourth. IP spiral cord low on last whorl with short, strongly abaxially recurved spine, increasing in length toward aperture. IP cord obsolete on previous whorls, only visible with short spine. Last whorl with adis, IP, P1–P6 on shoulder and convex part and ADP, MP, ABP on siphonal canal. P1 broadest cord with longest spine, P2–P5 approximately similar in size and strength, P6 very small cord and spine, followed by very short ads spinelet. P1, P4 and P6 spines weakly adaperturally bent, P2 and P3 spines weakly abaperturally recurved. ADP, MP and ABP spines abaxially recurved, with longest and more strongly recurved spine on last varix.

Aperture moderately small, roundly ovate. Columellar lip narrow, smooth, rim partially weakly erect, a small portion adherent at adapical extremity. Anal notch very shallow, broad. Outer lip erect, undulate, smooth or weakly undulate within. Siphonal canal medium sized, broad, straight, narrowly open and weakly dorsally recurved at tip, with long, abaxially recurved spines.

Remarks. — *Favartia humilis* most resembles *F. kanneri* n. sp. but *F. humilis* has a smaller, narrower, more fragile shell with a comparatively lower spire, a narrower, longer siphonal canal, narrower spiral cords and narrower, more acute varical spines. Moreover, the spines are strongly abaperturally recurved in *F. humilis* (Fig. 1H) while they are broader, blunt and straight or almost straight in *F. kanneri* n. sp. (Fig. 1D) the P1, P3–P4 spines being yet straighter and even weakly adaperturally bent on last (apertural) and penultimate varices.

Favartia keenae (Fig. 1I–L) not signalized in the Galapagos Islands, is a species with a stouter shell, a lower spire and a comparatively longer, tapered siphonal canal. It also has fewer axial varices and abaperturally, much shorter, recurved varical spines.

Favartia norrisii (Reeve, 1845) described from San Pedro, Ecuador, and also known from Costa Rica to Peru, was widely commented on by D'Attilio & Myers (1987). It differs from *F. kanneri* n. sp. by its more fragile shell, the smaller, more delicate, sharp and strongly abaperturally curved spines, and its longer, narrower and strongly tapered siphonal canal.

The other species from the Galapagos and the West Panamic zone are very different and do not have to be compared here.

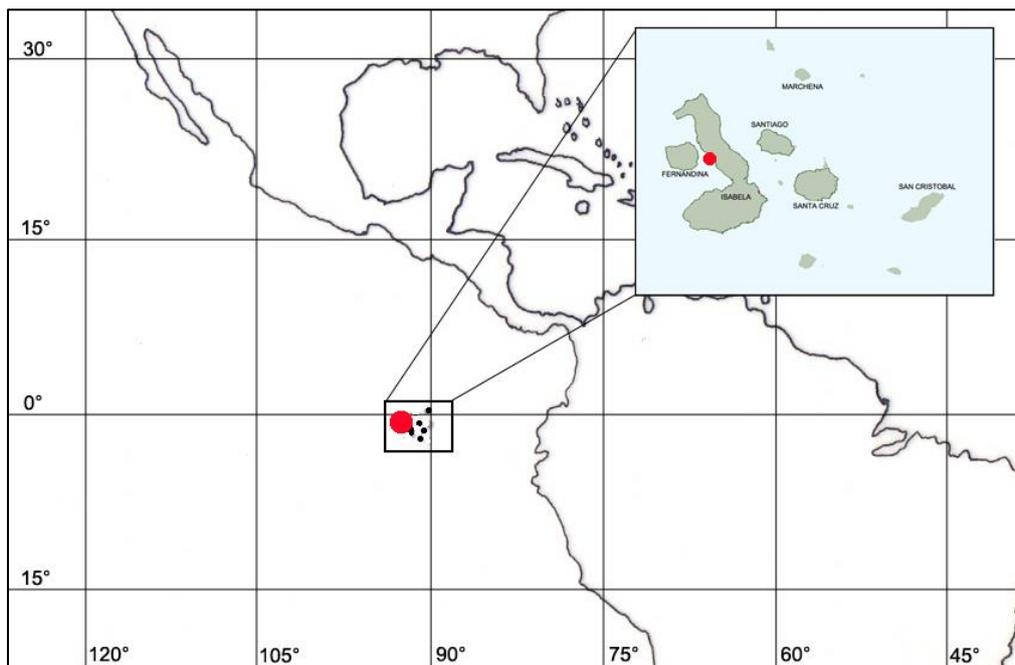


Figure 3. Distribution of *Favartia kanneri* n. sp.

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Captions

Figure 1

A–D, M. *Favartia kanneri* n. sp. Galapagos Islands, Isabela Island, Urvina Bay, in rubble, at base of reef, **holotype MNHN-IM-2000-36519**, 35.0 mm; M. Spiral cords morphology; **E–H, N.** *Favartia humilis* (Broderip, 1833). Mexico, Guerrero, Acapulco, off Rio Balsas, dredged in 73–91 m, RH, 31.6 mm; N. Spiral cords morphology. **I–L.** *Favartia keenae* (Vokes, 1970), West Panama, Pearl Islands, Pedro Gonzalez Island, 1 m, RH, 30.0 mm

Figure 2

A–C. *Favartia exigua* (Broderip, 1833). A. Galapagos Islands, Santa Cruz Island, RH, 21.1 mm; B–C. Mexico, Sonora, Lobos Island, RH, 17.5 mm. **D–E.** *Favartia incisa* (Broderip, 1833), Panama, Cameron, Vera Cruz, RH, 26.5 mm. **F–H.** *Favartia lappa* (Broderip, 1833). F–G. Galapagos Islands (no other data), RH, 22.5 mm; H. *Favartia lappa* (Broderip, 1833), West Panama, Pearl Islands, Bayoneta Island, rocks, low tide, RH, 22.7 mm. **I–J.** *Favartia perita* (Hinds, 1844), West Panama, Canal de Afuera Island, 37–74 m, RH, 27.4 mm. **K–M.** *Favartia purdyae* Vokes & D'Attilio, 1980, Galapagos Islands, Bartholome Island, S side, under rock, intertidal, SBMNH 91497, 16.6 mm. **N–P.** *Favartia radwini* (Emerson & D'Attilio, 1970). N–O. Galapagos Islands, Isabella Island, at Tagus Cove, 100 m, holotype AMNH 155903, 33.5 mm (photos AMNH); P. Galapagos Islands, Isabela Island, Tagus Cove, 100 m, paratype SBMNH 361820, 13.5 mm (immature). **Q–R.** *Favartia vittata* (Broderip, 1833), West Panama, Icaico, on rocks, low tide, RH, 27.9 mm