

## A new *Acesta* species (Bivalvia: Limidae) from Vietnam

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A new species of *Acesta* H. & A. Adams, 1858, is described from offshore southeast of Nhatrang City, Khánh Hòa, Central Vietnam, and compared to four other species of this genus. It is characterized by the least oblique shape, a rather long dorsal margin and very thick edges of the byssal gape. Some notes on *Acesta marissinica* and *A. philippinensis* are added.

Keywords: Bivalvia, Limidae, *Acesta*, taxonomy, Vietnam.

### INTRODUCTION

The genus *Acesta* H. & A. Adams, 1858, is known to be represented by two species in Vietnamese waters, viz. *Acesta rathbuni* (Bartsch, 1913) and *A. marissinica* Yamashita & Habe, 1969. Early in 2014, a hitherto unknown file clam was

found in waters off southeastern Nhatrang in central Vietnam. It is not listed by Lutaenko (2000), Hylleberg & Kilburn (2003), Thach (2005), and Huber (2010). It is here described as new to science.

Abbreviations: ANSP, Academy of Natural Sciences of Drexel University, Philadelphia, USA; MNHN, Muséum National d'Histoire Naturelle Paris, France; RMNH, Naturalis Biodiversity Center, Leiden, The Netherlands; SH, Shell height; SW, Shell width.

### SYSTEMATIC PART

Class Bivalvia Linnaeus, 1758

Superfamily Limoidea Rafinesque, 1815

Family Limidae Rafinesque, 1815

*Acesta* H. & A. Adams, 1858

Type species (by monotypy): *Ostrea excavata* Fabricius, 1779.

*Acesta kronenbergi* spec. nov. (Figs 1-7)

Material. — Offshore, southeast of Nhatrang City, Khánh Hòa Province, central Vietnam (RMNH 5003913, holotype; SH 166.0 mm; Figs 1-2).

Paratypes (all from type locality): no. 1, SH 159.0 mm (ANSP 461240; Figs 3-4); no. 2, SH 147.6 mm (MNHN IM-2000-27996; Fig. 5).

Diagnosis. — Differs from the other species of this genus in the least oblique shape, a rather long dorsal margin and the very thick edges of the byssal gape.

Description. — Shell medium-sized for the genus (SH 145-166 mm in fully grown specimens), slightly oblique, quadrate ovate in outline and higher than long, with the shell length about 73.3% of the shell height; colour yellowish outside and white inside. Dorsal margin straight and about 60.9% of the shell length, ventral margin asymmetrically convex. Anterior auricle shorter than the posterior one. Byssal gape narrow, with very thick edges. Anterior margin nearly straight, posterior margin somewhat curved. Valves weakly inflated (mean SW/SH 31.6%) with posterior part flatter and broader than anterior part, umbos broad and

non-touching. Sculpture consisting of regularly-spaced radial ribs, strongest along the ventral margin and at the posterior part, nearly obsolete at the umbonal area. Hinge plate edentulous, ligament narrow, black and situated in an elongate resilifer.

Range and habitat. — Offshore Khánh Hòa to Bình Thuận Provinces, central Vietnam. The specimens occur sympatrically with *Acesta rathbuni* and *A. marissinica* on sandy mud at 200-350 m. The type specimens were collected at 250 m depth by trawling.

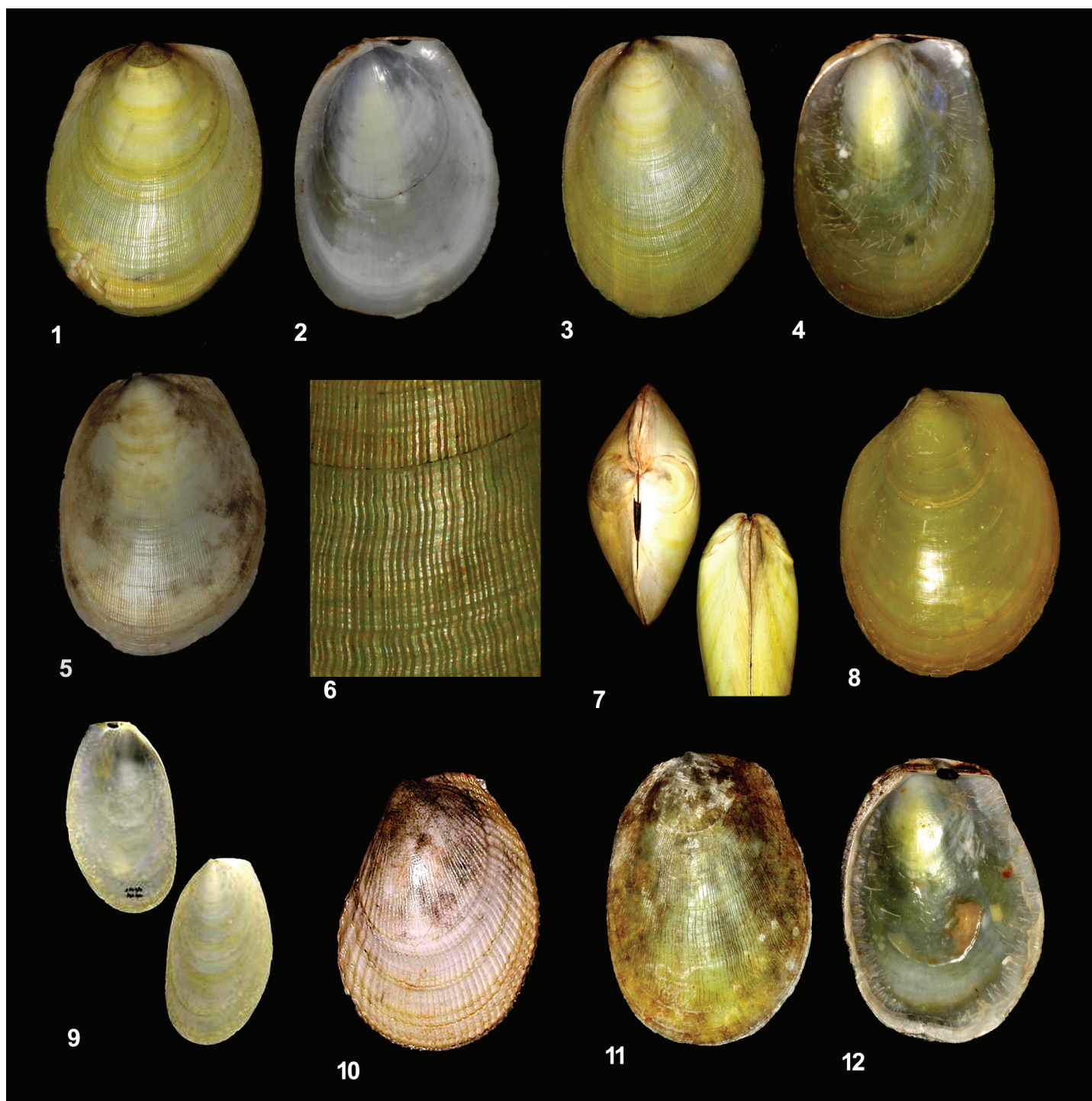
Etymology. — This new species is named in honour of Gijs Kronenberg of the Netherlands for his contributions to malacology and his interest in the study of Vietnam shells.

Differentiation. — See Table 1. *Acesta kronenbergi* spec. nov. is most similar to *A. rathbuni* (Fig. 8) and *A. marissinica* (Figs 11, 12). The new species, however, has a narrow, distinct radial ribbing, whereas the sculpture of both *A. rathbuni* and *A. marissinica* is less prominent.

*Acesta kronenbergi* differs from *A. philippinensis* (Bartsch, 1913) (Fig. 9) in its less oblique, broader and more quadrate shape, non-terminal beaks, stronger radial ribbing and a byssal gape with much thicker edges.

	<i>Acesta kronenbergi</i>	<i>Acesta rathbuni</i>	<i>Acesta marissinica</i>	<i>Acesta philippinensis</i>	<i>Acesta smithi</i>
<b>Size</b>	Medium adult size	Larger adult size	Larger adult size	Larger adult size	Medium adult size
<b>Shape</b>	Quadrate-ovate	Elongate-ovate	Elongate, laterally widened	Very elongately ovate	Ovate
<b>Convexity</b>	Weakly inflated	Strongly inflated	Inflated	Slightly inflated	Inflated
<b>Dorsal margin</b>	Long	Short	Moderately long	Short	Moderately long
<b>Anterior auricle</b>	Long	Nearly lacking	Shorter	Nearly lacking	Nearly lacking
<b>Byssal gape</b>	With very thick edges	With very thin edges	With moderately thick edges	With thin edges	With moderately thick edges
<b>Anterior margin</b>	Strongly sloping near dorsal margin	Concave near dorsal margin	Slightly sloping near dorsal margin	Slightly convex	Concave
<b>Umbones</b>	Broad and high	Narrow and pointed	Short	Terminal	Terminal
<b>Radial ribs</b>	Narrow, well visible	Very fine, nearly obsolete	Flat	Weak	Strong
<b>Shell thickness</b>	Thick	Thin	Moderately thick	Very thin	Moderately thick

Table 1. Comparison of *Acesta kronenbergi* spec. nov. to *A. rathbuni*, *A. marissinica*, *A. philippinensis*, and *A. smithi*.



*Acesta kronenbergi* differs from *A. smithi* (Sowerby III, 1888) (Fig. 10) in a more quadrate shape, non-terminal beaks, the anterior margin which is not concave, and weaker radial ribbing.

#### A NOTE ON *ACESTA MARISSINICA*

Huber (2010: 635) referred to the illustration of the holotype of *Acesta marissinica* Yamashita & Habe, 1969 (Higo et al., 2001: 153, fig. B352) and considered *A. marissinica* a junior synonym of *A. philippinensis* (Bartsch, 1913). However, *A. philippinensis* (holotype illustrated here, Fig. 9) is quite different because of its very slender and more oblique shape, while *A. marissinica* is more robust, broader in shape and laterally widened. Along the dorsal margin there is a broad oblique flat area keeping the two beaks of *A. marissinica* well separated, while the beaks of *A. philippinensis* are much more narrowly-spaced (the broad oblique flat area is much reduced). The illustration of *A. marissinica* cited by Huber (2010) has the number B352 [not B252 as stated by Huber, 2010, in Higo et al. (2001)].

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Figs 1-12. *Acesta* species. 1-7, *Acesta kronenbergi* spec. nov., offshore Southeast Nha Trang City, Khánh Hòa, Vietnam. 1-2, Holotype, SH 166.0 mm (RMNH 5003913); 3-4, paratype 1, SH 159.0 mm (ANSP 461240); 5, paratype 2 (uncleaned), SH 147.6 mm (MNHN IM-2000-27996); 6, detail of the surface sculpture, holotype; 7, dorsal view with ligament (left, holotype) and byssal gape (right, holotype); 8, *A. rathbuni*, SH 172 mm, Vietnam; 9, *A. philippinensis*, holotype (photo by Smithsonian Institution); 10, *A. smithi*, SH 76 mm (photo by Femorale); 11-12, *A. marissinica*, SH 174 mm (uncleaned), Vietnam.

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