

A new species of *Asiaharpa* (Neogastropoda: Harpidae) from the Miocene of West Java, Indonesia, with a reappraisal of harpid phylogeny

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ABSTRACT A new species of Harpidae, *Asiaharpa javanensis* n. sp., is described from a fossil site ca. 12 My old, near Cisadane river in Cisauk district, Tangerang Regency, West Java, Indonesia. The phylogenetic position of *Asiaharpa* is reevaluated through a reassessment of conchological characters; it is a further example of the extraordinary diversification of the shallow marine fauna in the Sunda shelf during the Middle Miocene. The subfamily Harpinae is divided into three tribes: the fossil Eocitharini n. trib. (including only *Eocithara* Fischer, 1883 from the Paleocene to the Oligocene), Austroharpini n. trib. (also monotypic: *Austroharpa* Finlay, 1931 since the Oligocene), and the nominotypical Harpini including the basal *Plesioharpa* n. gen. from the Oligocene, the Oligocene to Recent *Harpa* Röding, 1798, and *Asiaharpa* Raven, 2021 from the Miocene of Sunda.

KEY WORDS Gastropoda, Harpidae, *Asiaharpa javanensis*, Miocene, Java, Indonesia, phylogeny, biogeography

INTRODUCTION

Within the neogastropod evolutionary radiation, the Harpidae stand out as a morphologically derived and phylogenetically isolated lineage. These are relatively large marine gastropods having a distinctive shell with shiny surface, enlarged last whorl, very wide aperture, and a sculpture consisting of sharp, regularly placed axial ribs intersected by little or no spiral elements. The soft parts are massive, including an extensive foot and a long proboscis. They are active predators of crustaceans, crawling above the sediment at night. Harpids are strictly tropical, restricted to shallow or moderately deep coastal waters, where they are found on sandy and muddy bottoms (Rehder, 1973). The Harpidae is a well-defined clade within core Neogastropods; it is sister to the large group encompassing the Buccinoidea and Conoidea radiations, and thus the Harpoidea is best considered a separate monotypic superfamily (Fedosov *et al.*, 2024).

In contrast with most other neogastropod families, the Harpidae is a species-poor lineage with a limited fossil record. Living members of the nominotypical Harpinae include only 20 living species, belonging to two genera originating in the Oligocene: six species are recognized in *Austroharpa* Finlay, 1931, all in southern Australian waters (Lorenz, 2020), and 14 in the genus *Harpa* Röding, 1798, mostly in the Indo-Pacific (Rehder, 1973; Vokes, 1984; Poppe *et al.*, 1999; Berschauer & Petuch, 2016; Nolf, 2024; Oo, 2025). In addition, two extinct genera are known: *Eocithara* Fischer, 1883, ranging throughout the Tethyan region from the late Paleocene to the Oligocene, and surviving in Java and southern Australia until the Miocene; and *Asiaharpa* Raven, 2021 hitherto known only by its type species from the Miocene of Borneo (Rehder, 1973; Merle & Pacaud, 2004; Raven 2021). The genus *Cryptoconcha* Mörch, 1858 from the Paleocene and Eocene of Europe and North America (Pacaud & Sautereau, 2020) is usually included

in the Harpidae (Korobkov, 1955; Bouchet *et al.*, 2017), given its vaguely similar shape and incipient axial ribs; these traits may well be homoplastic, thus placement of the monotypic Cryptochordidae Korobkov, 1955 within the current knowledge of neogastropod phylogeny remains unclear (Ptchelintsev & Korobkov, 1960; Rehder, 1973).

The Sunda islands have extensive, exceedingly rich marine Neogene fossil sites. Since the classic works by Martin (1879-1880, 1881-1906, 1916, 1919), the shallow-water Miocene molluscan assemblages of Java have been known for their remarkable diversity. In recent years, a renewed interest in those fossil faunas has yielded numerous previously undescribed taxa (Robba, 1996, 2013; Skwarko, 1994; Skwarko & Sufiati, 1994; Skwarko, Sufiati & Limbong, 1994; Hoek Ostende *et al.*, 2002; Dharma, 2005, 2024; Kase *et al.*, 2015; Dekkers *et al.*, 2020; Landau *et al.*, 2020a, b; Dovesi & Parsons, 2021; Merle *et al.*, 2021; Liverani & Wieneke, 2022; Celzard & Dovesi, 2023, 2024a,b; Altaba, 2024; Dovesi, 2024). The Harpidae are exceedingly rare in these Javanese fossil faunas, so far being represented only by a species of *Eocithara* from the Lower Miocene (Martin, 1916, 1919; Vlerk, 1931; Hoek Ostende *et al.*, 2002; Skwarko & Sufiati, 1994).

The geological history of Java is quite complex (Smyth *et al.*, 2005; Clements & Hall, 2007). Throughout the Cenozoic, the area underwent several phases of carbonate deposition in extensive shelf areas (Wilson, 2002). The Middle Miocene was a period of extensive development of stable shallow shelves, following intense vulcanism. Thus sediments of this age contain large amounts of near-shore marine mollusks and a large fraction of siliciclastic sediments. The physiography of West Java has geological features consisting of

flood plains, folded hills and volcanoes. Based on physiography, van Bemmelen (1949) divided West Java into four zones: Jakarta Zone, Bogor Zone, Bandung Zone and Southern Mountains Zone. Although some Middle Miocene sites in extreme western Java can be attributed to the Langhian, most outcrops throughout West Java appear to be of a slightly later age, likely belonging to the Nyalindung formation, formed during the Serravallian and with an approximate age around 12 Myr (Syarifin, 2011; Robba, 2013; Aswan *et al.*, 2017; Kapid *et al.*, 2019; Dekkers *et al.*, 2020; Aswan, 2021; Dovesi & Parsons, 2021; Kesuma & Aswan, 2022).

Herein we describe a new species of Harpidae from the late Middle Miocene of Java. It belongs into *Asiaharpa*, but differs clearly from the only other known species of the genus. We also reexamine the phylogenetic position of this Sunda endemic genus, and interpret the significance of our findings in terms of regional biogeography.

ABBREVIATIONS

MDC	Matteo Dovesi collection (Bologna, Italia).
IGF	Natural History Museum of Firenze, Firenze, Italia.

SYSTEMATICS

Class:	Gastropoda Cuvier, 1795
Subclass:	Caenogastropoda Cox, 1960
Order:	Neogastropoda Wenz, 1938
Superfamily:	Harpoidea Bronn, 1849
Family:	Harpidae Bronn, 1849
Subfamily:	Harpinae Bronn, 1849
Genus:	<i>Asiaharpa</i> † Raven, 2021

Asiaharpa javanensis

Altaba & Dovesi, new species †

(Plates 1-2-3)

Description. Shell small for the Harpinae, smaller than any living representative, 32.3-41.4 mm in length; fairly thin. Last whorl very large, well inflated, slightly shouldered on top; moderately wide, elongate oval aperture. Columellar area smooth, with small adherent shield, not expanded towards suture. Spire low, small, mamillate, with at least 4 1/2 whorls (but likely two more apically). Axial sculpture consisting of thin, raised, sharp, regularly and widely spaced ribs, 11-12 on last whorl, with polished facing side. Adapically the ribs form a low crown, each projecting as a small, sharp opisthocline shoulder. All ribs end adapically as a twisted, prosocline-oriented laplet that is appressed to the preceding whorl above the suture and remains individualized from adjacent laplets. Abapically, ribs give rise to siphonal fascioles marking umbilical ridge. Ribs become more numerous riblets on previous whorls (15-16 on penultimate whorl). Secondary sculpture formed by much lower, densely and regularly placed riblets (14-15 on last intercostal spaces), criss-crossed by 38-40 spiral chords of similar magnitude that do not extend over major axial ribs. Siphonal canal very short, indistinct.

Type Material. Holotype IGF105557 length 32.3 mm, width 19.4 mm, preserved in the Museo di Scienze Naturali dell' Università di Firenze (Firenze, Italia) (Plate 1).

A. javanensis paratypes (Plate 2): A= length 41.4 mm, width 24.5 mm, (MDC); B= length 37.4 mm, width 23.8 mm, (MDC).

Type Locality and Stratigraphic Range. Golden Park, Suradita, Kecamatan (District) Cisauk, Kapupaten (Regency) Tangerang, Propinsi (Province) Banten, West Java, Indonesia. 6° 20' 58" S, 106° 39' 08" E.

Altitude 22 m. This outcrop likely belongs to the Nyalindung Formation, of Serravallian age.

Etymology. The species name is a patronymic adjective referring to the island where it was found.

Differential Diagnosis. *Asiaharpa javanensis* n. sp. differs from *A. sarawakiana* Raven, 2021 (type and only other species known of *Asiaharpa*) in being more elongate, less inflated, with last whorl not evenly rounded but slightly shouldered; it also has stronger secondary axial sculpture, and more projecting adapical rib shoulders forming a low crown. Its is readily distinguishable from all other harpines by the much reduced parietal callus and the lack of any sutural callus, having instead a distinctive suprasutural series of laplets formed by the twisted adapical ending of main ribs.

PHYLOGENETICS

The phylogenetic position of *Asiaharpa javanensis* n. sp. can be assessed on the basis of characters observable in the available fossils. The analysis is limited to the four genera in Harpinae, taking the morumine harpid *Morum* as outgroup. Among the conchological characters considered by Merle & Pacaud (2004), only those involving synapomorphies have been considered. In addition, characters related to the protoconch must be omitted, as this part of the shell is missing in all known specimens of *Asiaharpa*. Their character 6 has been split into two (our 3 and 4), and theirs 18 and 19 have been merged into a single one (our 6). Their character 22 (siphonal fascioles making collumellar relief) seems rather unclear and has been deleted. The resulting characters have thus been recoded:

1. Development of the cord spine P1: abaxial (0); absent (1); adaxial incipient (2); adaxial developed (3).

2. Shape of chord spine P1: non-lamellar (0); lamellar at all stages (1); lamellar only in juvenile (2).
3. Adapical lamellar fold: absent (0); present only in juvenile (1); present at all stages (2); relief on last whorl (3).
4. Chords: convex (0); narrow (1); reduced (2).
5. Axial sculpture overriding preceding whorl: no (0); poorly (1); moderately (2); strongly (3).
6. Secondary axial riblets: absent (0); low ridges (1); distinct lamellae (2).
7. Parietal expansion overlapping beginning of last whorl: yes (0), no (1).

8. Chords extending over main ribs: occasionally (0), never (1)

Data in the character-state matrix (Table 1) were analyzed under a maximum parsimony criterion. Each character was optimized for every possible cladogram, and all steps were added to yield the total length of each tree. Since there are only four ingroup taxa, there are only 15 possible cladograms (strictly dichotomous ultrametric; Felsenstein, 2004; Altaba, 2009; Gavryushkina *et al.*, 2013). Thus, calculations were done by hand.

Character:	1	2	3	4	5	6	7	8
<i>Morum</i>	0	0	0	0	0	0	0	0
<i>Eocithara</i>	1,2	1	1	1	1,2	2	1	1
<i>Austroharpa</i>	2,3	1	2	0	1	0	1	0
<i>Harpa</i>	3	2	3	2	3	1	0	1
<i>Asiatarpa</i>	2	1	2	1	3	2	1	1

Table 1. Character state matrix of conchological traits for genera in Harpinae. *Morum* is outgroup.

Mapping transformation series on all possible cladograms resulted in quite uneven tree lengths (Figure 1). Optimal solutions on most trees require an appreciable number of additional steps. A single most parsimonious tree (Figure 2) was obtained, requiring only two additional steps. It is appreciably better than the next best trees. The best tree has *Austroharpa* as the sister group of the other three harpine genera. After divergence of *Eocithara*, the remaining *Harpa* and *Asiatarpa* appear as sister taxa. Character 7 appears to be homoplastic, suggesting that the shape of the parietal expansion developed independently in *Morum* and *Harpa*. Likewise, character state 3 of character 1 also appears to be the result of convergent evolution, being present in all *Harpa* species and independently appearing in some *Austroharpa*.

DISCUSSION

Our hypothesis on the phylogeny of the Harpinae is congruent with that of Merle & Pacaud (2004), but differs from the proposal by Raven (2021) in that we find *Asiatarpa* to be the sister taxon of *Harpa*. Our alternative result has two relevant implications. First, there is no need to invoke a long period with no fossil record for this lineage (as proposed by Raven 2021). *Asiatarpa* appears to be endemic to the Sunda shelf in the Middle Miocene. This leads to our second point: if *Harpa* is known since the early Oligocene, recognizing *Asiatarpa* as a distinct genus renders *Harpa* paraphyletic. Although there is no serious problem in accepting the paraphyletic nature of lineages through evolutionary time (Carter *et al.*, 2015),

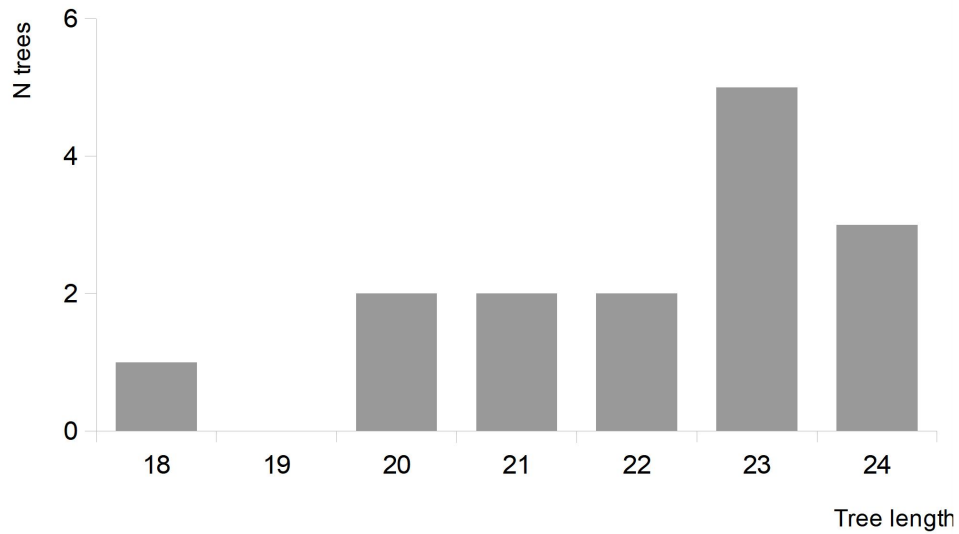


Figure 1. Distribution of the 15 possible four-taxa rooted trees with maximum parsimony optimization of character states in Table 1. The single most parsimonious tree stands apart, needing only two additional steps.

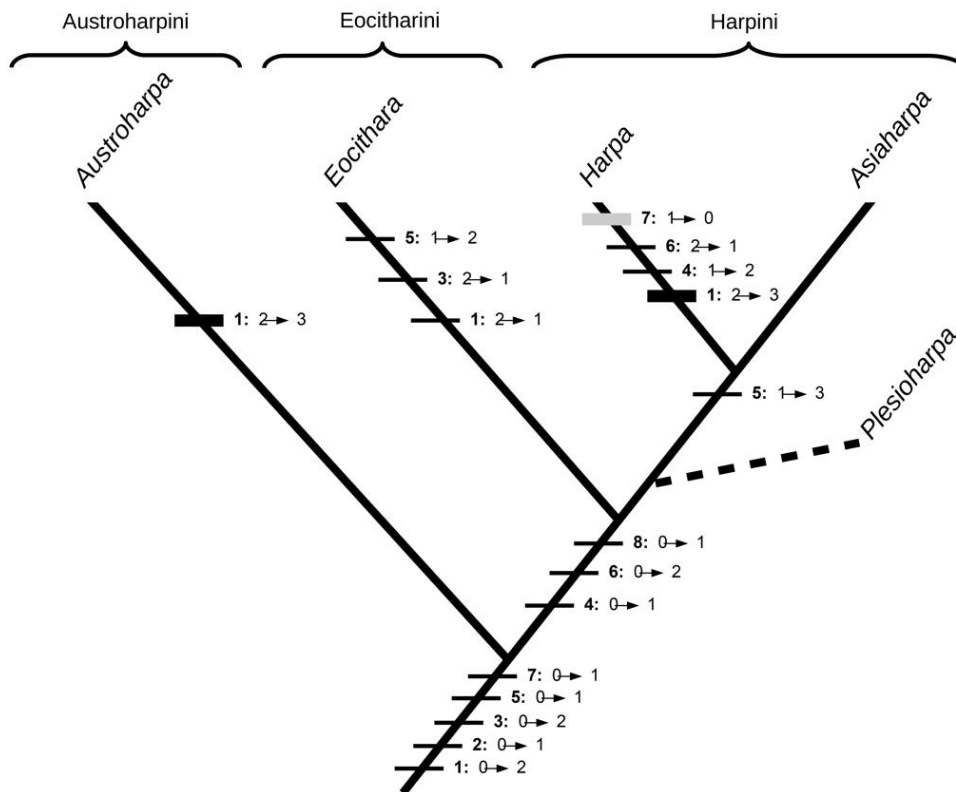


Figure 2. Single most parsimonious tree of Harpine genera. Homoplasies are indicated by thick lines: reversals in grey, convergences in black.

a reevaluation of early members of the genus is warranted.

Two species of *Harpa* are known predating the Middle Miocene: *H. myrmia* Olsson, 1931 from the Rupelian (early Oligocene) of Peru, also been recorded from the Burdigalian (Lower Miocene) of Venezuela (Olsson, 1931; Gibson-Smith & Gibson-Smith, 1982); and *H. vicksburgiana* Dockery, 1984 from the early Oligocene of Mississippi, USA. Both are relatively small, measuring between 32 and 41 mm in length. *H. myrmia* differs strikingly from all (later) species of the genus in three traits. The spiral chords are well expressed on the main (very wide) ribs. This is a plesiomorphic state in the Harpinae. In addition, the spire conspicuously lacks the thickened suprasutural area, thus retaining the thin lamellar adapical morphology of the main ribs throughout ontogeny. This is also a plesiomorphic state. It also has a fine reticulate sculpture on the intercostal spaces, a trait shared with *Asiaharpa*. It appears that this Oligocene to Early Miocene species predates the split between *Harpa* and *Asiaharpa*. In contrast, *H. vicksburgiana* has a suprasutural glaze formed by the upper end of the main ribs, as in all living *Harpa*. Although an adequate cladistic analysis including these and other fossil harpines is desirable, direct examination seems necessary, and is beyond the scope of the present paper. However, given the distinctive, plesiomorphic morphology of *H. myrmia*, as well as its early stratigraphic occurrence, we propose to place it in a new, monotypic genus, as well as the recognition of three tribes within the Harpinae.

Plesioharpa n. gen. Type species: *Harpa myrmia* Olsson, 1931, early Oligocene of Peru. We hypothesize this new genus is ancestral to both *Harpa* and *Asiaharpa*.

Eocitharini n. trib. Type genus: *Eocithara* Fischer, 1883, middle Paleocene to Middle Miocene. This is the sister taxon of the nominotypical Harpini (including *Harpa*, *Asiaharpa* and *Plesioharpa* n. gen.).

Austroharpini n. trib. Type genus: *Austroharpa* Finlay, 1931, late Oligocene to Recent. This is the sister group of the clade formed by Eocitharini + Harpini.

The biogeographical history of harpines appears to be tightly linked to the development of tropical oceans. Having a Tethyan origin, an early branch (the Austroharpini) became restricted to Australia. The Eocitharini became extinct by the Late Miocene, following major reorganization of marine currents. The Harpini originated in western South America (*Plesioharpa* n. gen.), giving rise to two lineages: *Harpa* spread to North America and the Caribbean (extinct in these areas) and west Africa (one living species), as well as to the Indo-Pacific, where it underwent a moderate diversification. *Asiaharpa* originated in the Sunda shelf in the Middle Miocene, and likely remained endemic to this high-biodiversity area, going extinct when global circulation patterns affected dramatically the area in the latest Miocene.

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LITERATURE CITED

- Altaba, C.R. 2009.** Universal artifacts affect the branching of phylogenetic trees, not universal scaling laws. PLoS ONE 4(2): e4611.
doi:10.1371/journal.pone.0004611

- Altaba, C.R. 2024.** Un nou gènere fòssil de la família Strombidae (Gastropoda: Caenogastropoda: Stromboidea) del Miocè mitjà de Java. *Butlletí de la Institució Catalana d'Història Natural* 88:21-32.
- Aswan, E.S. 2021.** Depositional environmental evolution of Nyalindung Formation based on paleontology molluscan study, Ciodeng area, Sukabumi, West Java, Indonesia. *Riset Geologi dan Pertambangan, Indonesian Journal of Geology and Mining* 31:117-130.
- Aswan, E.S., D. Kistiani, I.Y. Abdurrahman, W.D. Santoso, A. Rudyawan & T.Z. Oo. 2017.** Late Miocene molluscan stage of Java insight from new field studies. *IOP Conference Series: Earth and Environmental Science* 71:012031. doi:10.1088/1755-1315/71/1/012031
- Berschauer, D.P. & E.J. Petuch. 2016.** A new species of *Harpa* (Gastropoda: Harpidae) from the Coral Sea archipelagos of Queensland, Australia. *The Festivus* 48(2):103-108.
- Bouchet P., J.P. Rocroi, B. Hausdorf, A. Kaim, Y. Kano, A. Nützel, P. Parkhaev, M. Schrödl & E.E. Strong. 2017.** Revised classification, nomenclator and typification of gastropod and monoplacophoran families. *Malacologia* 61(1-2): 1-526.
- Carter, J.G., C.R. Altaba, L.C. Anderson, D.C. Campbell, Z. Fang, Z., P.J. Harries & P.W. Skelton. 2015.** The paracladistic approach to phylogenetic taxonomy. *Paleontological Contributions* 12:1-9.
- Celzard, A. & M. Dovesi. 2023.** A New species of fossil *Pseudosimnia* (Gastropoda: Ovulidae) from the Miocene of West Java, Indonesia. *The Festivus* 55:154-164.
- Celzard, A. & M. Dovesi. 2024a.** First record of the genus *Neosimnia* (Gastropoda: Ovulidae) in the Eastern Indian Ocean, with the description of five fossil species from the Miocene of West Java, Indonesia. *The Festivus* 56 (2):89-100.
- Celzard, A. & M. Dovesi. 2024b.** *Dissona inusitata*, a new fossil species of allied cowry (Gastropoda: Ovulidae) from the middle Miocene of West Java, Indonesia. *The Festivus* 56(4):271-275.
- Clements, B. & R. Hall. 2007.** Cretaceous to Late Miocene stratigraphic and tectonic evolution of West Java. P. 617-634. In: 31st Annual Convention of the Indonesian Petroleum Association. Indonesian Petroleum Association (IPA). Jakarta.
- Dekkers, A. M., V. Liverani, S. Ćorić, S.J. Maxwell & B.M. Landau. 2020.** A new genus for Indo-Pacific fossil strombids, and two new species from the Miocene of Java and Borneo (Caenogastropoda, Strombidae). *Basteria* 84:1-9.
- Dharma, B. 2005.** Recent & fossil Indonesian shells. ConchBooks, Hackenheim, Germany. 424 pp, 51 pls.
- Dharma, B. 2024.** A New Fossil Species of *Indolithes* new genus from Java, Indonesia (Gastropoda: Fasciolaridae). *The Festivus* 56(3):154-164.
- Dovesi, M. 2024.** A New Species of Fossil *Bistolida* (Gastropoda: Cypraeidae) from the Miocene of West Java, Indonesia. *The Festivus* 56 (1):3-8.
- Dovesi, M. & J. Parsons. 2021.** Two new species of *Barycypraea* (Gastropoda: Cypraeidae) from the Miocene of Java, Indonesia. *The Festivus* 53:116-126.
- Fedosov, A.E., P. Zaharias, T. Lemarcis, M.V. Modica, M. Holford, M. Oliverio, Y.I. Kantor & N. Puillandre. 2024.** Phylogenomics of Neogastropoda: the backbone hidden in the bush. *Systematic Biology* 73(3):521-531.
- Felsenstein, J. 2004.** *Inferring Phylogenies*, Sinauer Associates Inc.
- Gavryushkina, A., D. Welch & A.J. Drummond. 2013.** Recursive algorithms for phylogenetic tree counting. *Algorithms in Molecular Biology* 8:26. doi: 10.1186/1748-7188-8-26
- Gibson-Smith, J. & J.W. Gibson-Smith. 1982.** The genus *Harpa* Lamarck (Mollusca: Gastropoda) in northern South America. *Tulane Studies in Geology and Paleontology* 17:57-58.
- Hoek Ostende, L.W. van den, J. Leloux, F.P. Wesselingh & C.F. Winkler Prins. 2002.** Cenozoic Molluscan types from Java (Indonesia) in the Martin Collection (Division of Cenozoic Mollusca), National Museum of Natural History, Leiden. *NNM Technical Bulletin* 5:1-130, pls. 1-3.
- Kapid, R., W.D. Santoso, B. Ikhsan, M.A. Jambak & D.E. Irawan. 2019.** The Mid Miocene Climatic Optimum (MMCO) indication at low latitude sediment case study: the Miocene Cibulakan Formation, Bogor Basin, Indonesia. *International Journal on Advanced Science Engineering Information Technology* 2:594-600.
- Kase, T., Y. Kurihara, Y.M. Aguilar, H.S. Pandita, A.G. Fernando & H. Hayashi. 2015.** A new cerithioidean genus *Megistocerithium* (Gastropoda; Mollusca) from the Miocene of

- Southeast Asia: a possible relict of Mesozoic "Eustomatidae". *Paleontological Research* 19: 299-311.
- Kesuma, N.B. & E.S. Aswan. 2022.** Paleocurrent study of Nyalindung Formation through mollusks. Paleontological aspects in Ci Galasar River, Sukabumi, West Java. *Bulletin of Geology, Institut Teknologi Bandung* 6:919-933.
- Korobkov, I.A. 1955.** Spravochnik i metodicheskoe rukovodstvo po tretichnym molliuskam. Briukhonogie. [= A handbook and methodical guide to Tertiary molluscs. Gastropoda]. Gostoptekhizdat, Leningrad. 795 pp.
- Landau, B.M., J.G.M. Raven, A.E. Breitenberger & A.M. Dekkers. 2020b.** *Semiricinula preturbinoidea* spec. nov., a new species from the Miocene of Java (Gastropoda: Muricidae). *Basteria* 84:131-134.
- Liverani, V. & U. Wieneke. 2022.** Some more species in the genus *Spinatus* Dekkers *et al.*, 2020 (Gastropoda: Strombidae). *Conchylia* 52:81-87.
- Lorenz F. 2020.** A new species of *Austroharpa* (Gastropoda: Harpidae). *Conchylia* 51(1-2):3-11.
- Martin, K. 1916-1917.** Die Altmiocäne Fauna des West-Progogebirges auf Java. Sammlungen des Geologischen Reichs-Museums in Leiden, Neue Folge 2 (6-7):223-296, pls I-V.
- Martin, K. 1919.** Unsere palaeozoologische Kenntnis von Java, mit einleitenden Bemerkungen über die Geologie der Insel. Sammlungen des Geologischen Reichs-Museums in Leiden, Beil. Band I-XI, 1-158.
- Merle D. & J.-M. Pacaud. 2004** [«2003»]. New species of *Eocithara* Fischer, 1883 (Mollusca, Gastropoda, Harpidae) from the Early Paleogene with phylogenetic analysis of the Harpidae. *Geodiversitas* 26(1):61-87.
- Merle, D., B.M. Landau & A.E. Breitenberger. 2021.** New Muricidae (Mollusca, Gastropoda) from the Miocene of Java (Indonesia). *Basteria* 85:21-33.
- Nolf, F. 2024.** A gallery of pictures illustrating the variability of *Harpa cabriti* P. Fischer, 1860, with a special reference towards *Harpa lorenzi* D. Monsecour & K. Monsecour, 2018. *Neptunea* 17(2):1-13.
- Olsson, A.A. 1931.** Contributions to the Tertiary Paleontology of northern Peru: Part 4, The Peruvian Oligocene: *Bulls. American Paleontology* 17(63):1-164, pls. 1-21.
- Oo, N.N. 2025.** Notes on the Family Harpidae (Mollusca: Gastropoda) of Myanmar. *International Journal of Earth Sciences Knowledge and Applications* 7 (1):91-97.
- Pacaud, J.-M. & F. Sautereau. 2020.** Contribution des motifs colorés résiduels dans la discrimination d'espèces nouvelles de *Cryptochorda* Mörch, 1858 (Mollusca: Gastropoda: Harpidae) de l'Éocène du bassin de Paris et du Cotentin. *Geodiversitas* 42(29):559-595.
- Poppe G.T., T. Brulet & P. Dance. 1999.** The family Harpidae. *Conchological Iconography*. ConchBooks, Hackenheim. 69 p.
- Pchelintsev V.F. & I.A. Korobkov. 1960.** Spravocnik dlá Paleontologov i geologov SSSR. Mollúski – Brúhonogie [= Manual of paleontology and geology of SSSR. Mollusca-Gastropoda], in Y.A. Orlov (ed.), *Osnovy Paleologii* [= Fundamentals of Paleontology], v. 4. Gosgeoltekhizdata, Moscow, 368 p.
- Raven, J.G.M. 2021.** Notes on molluscs from NW Borneo 9. Harpidae (Neogastropoda), with the description of *Asiatarpa sarawakiana* gen. nov., spec. nov. *Vita Malacologica* 20:51-60.
- Rehder, H.A. 1973.** The family Harpidae of the world. *Indo-Pacific Mollusca* 3(16):207-274.
- Robba, E. 1996.** The Rembangian (Middle Miocene) mollusk-fauna of Java, Indonesia. I. Archaeogastropoda. *Rivista Italiana di Paleontologia e Stratigrafia* 102:267-292.
- Robba, E. 2013.** Tertiary and Quaternary fossil pyramidelloidean gastropods of Indonesia. *Scripta Geologica* 144:1-191.
- Sampurno. 1976.** Geologi Daerah Longsor Jawa Barat, *Geologi Indonesia* V 3(1):45-52.
- Skwarko, S.K. 1994.** Mollusca in Indonesian Cenozoic Biostratigraphy (a computerised compilation), v. 1. Introductory chapters, Amphineura, Cephalopoda, Scaphopoda. Geological Research and Development Centre, Bandung.
- Skwarko, S.K. & E. Sufiati. 1994.** Mollusca in Indonesian Cenozoic Biostratigraphy (a computerised compilation), v. 3. Gastropoda. Geological Research and Development Centre, Bandung.
- Skwarko, S.K., E. Sufiati & A. Limbong. 1994.** Mollusca in Indonesian Cenozoic Biostratigraphy (a computerised compilation), v. 2. Bivalvia.

Geological Research and Development Centre,
Bandung.

Smyth, H., R. Hall, J. Hamilton & P. Kinny. 2005.

East Java: Cenozoic basins, volcanoes and
ancient basement. P. 251-266. In: 30th Annual
Convention of the Indonesian Petroleum
Association. Indonesian Petroleum Association
(IPA), Jakarta.

Syarifin, 2011. Paleontologi formasi Nyalindung.

Bulletin of Scientific Contribution 9:17-27.

van Bemmelen, R.W. 1949. The geology of
Indonesia, Vol. 1A, General geology of
Indonesia and adjacent archipelagoes.

Government Printing Office, The Hague. 732 pp.

Vlerk, I.M. van der. 1931. Caenozoic Amphineura,
Gastropoda, Lamellibranchiata and Scaphopoda.

Leidse Geologische Mededelingen 5:206-296.

Vokes, E.H. 1984. The genus *Harpa* (Mollusca:
Gastropoda) in the New World. *Tulane Studies in
Geology and Paleontology* 18:53-60.

Wilson, M.E.J. 2002. Cenozoic carbonates in
Southeast Asia: implications for equatorial
carbonate development. *Sedimentary Geology*
147: 295-428.

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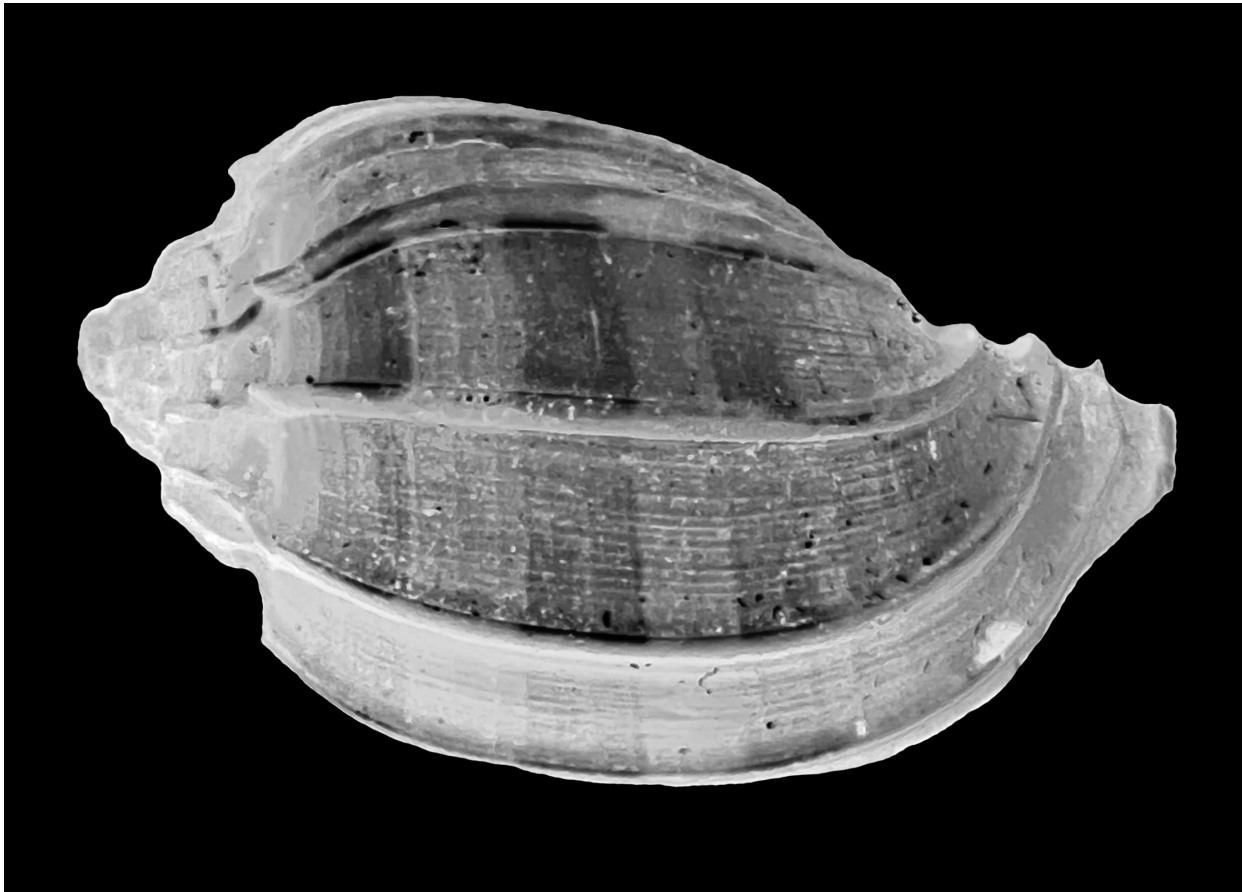


Plate 3. *Asiaharpa javanensis* n. sp. (MDC) under UV light.

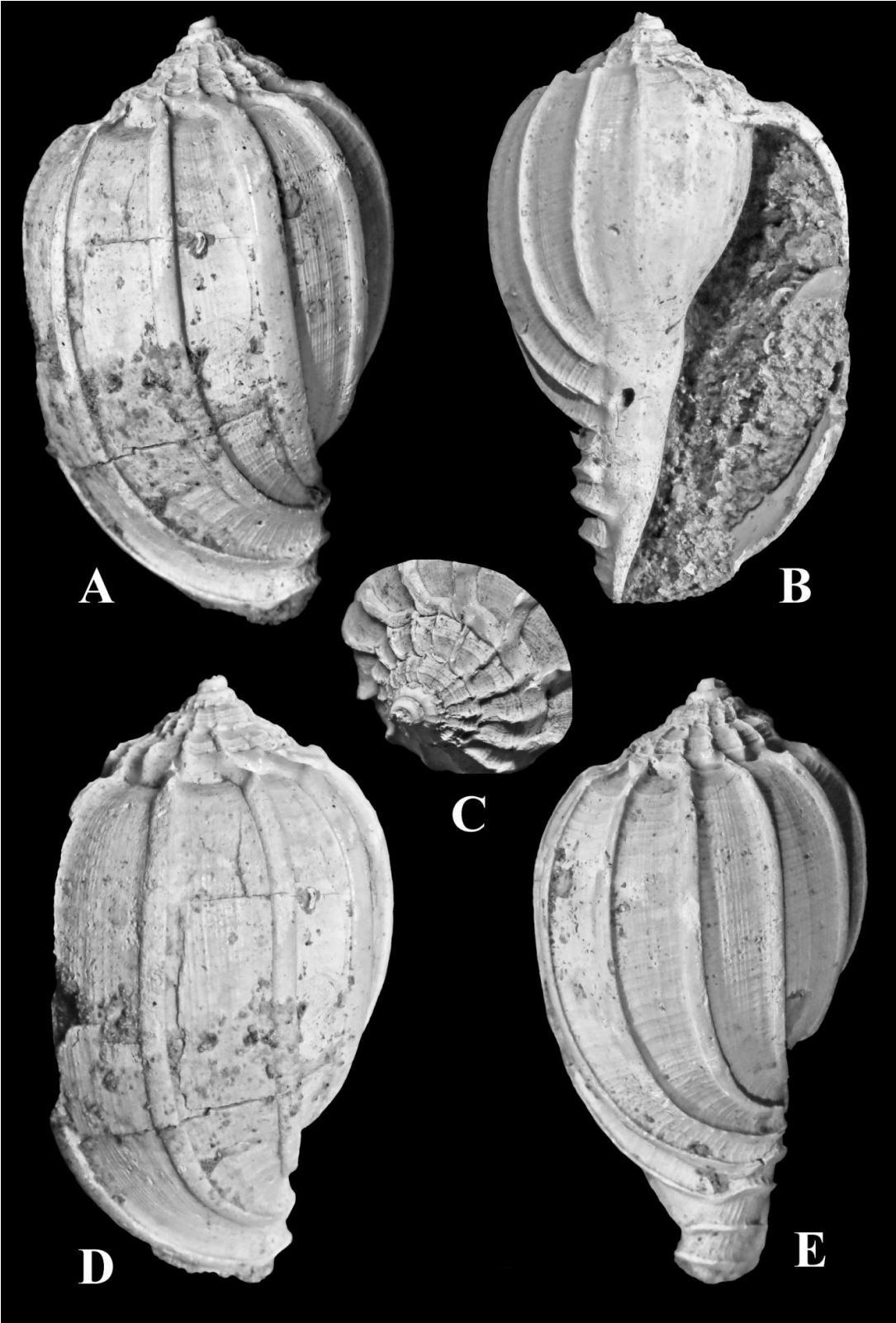


Plate 1. Holotype of *Asiaharpa javanensis* n. sp., 32.3 mm in length (IGF105557).

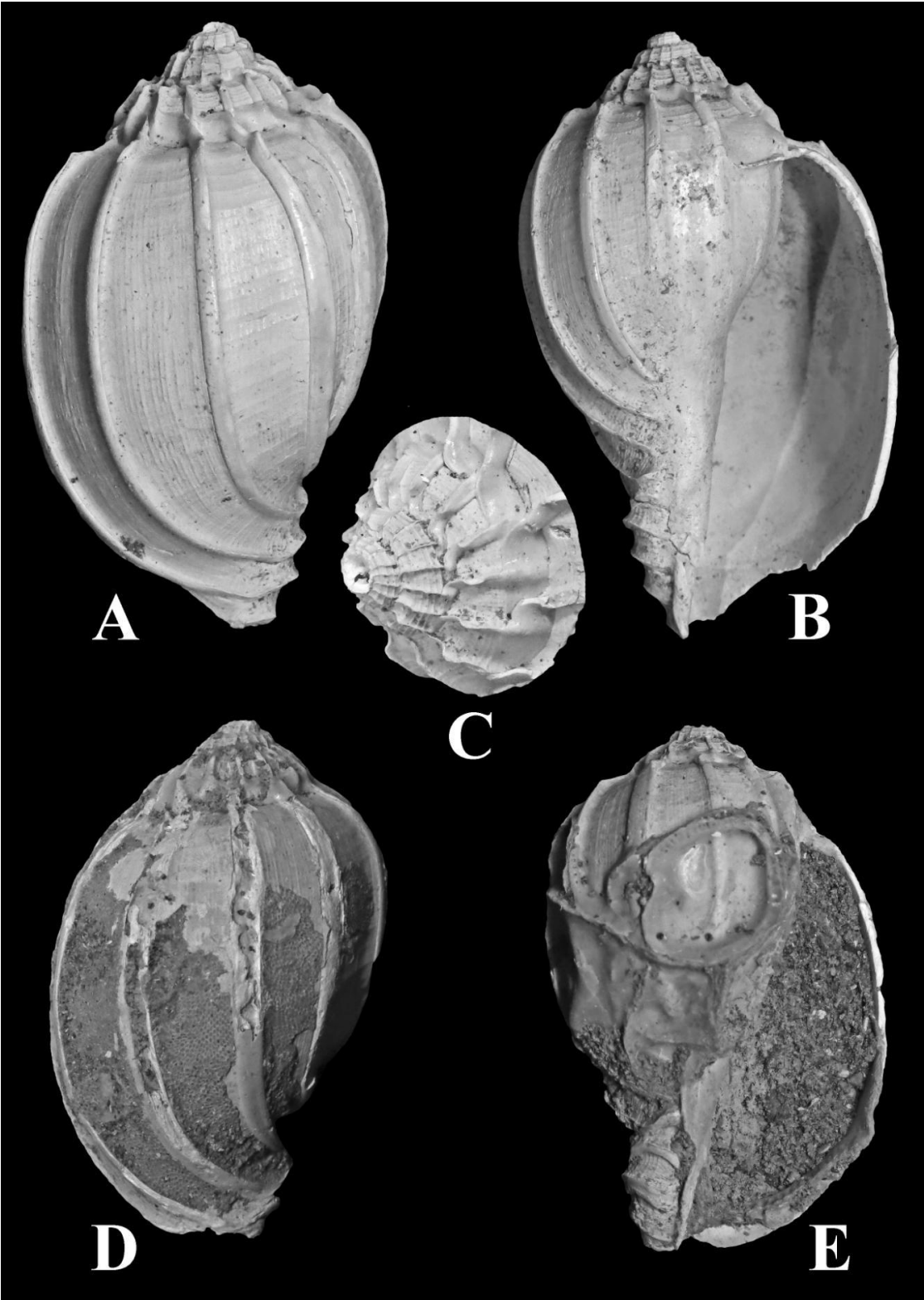


Plate 2. *Asiaharpa javanensis* n. sp. paratypes, A-C= length 41.4 mm, width 24.5 mm, (MDC); D, E= length 37.4 mm, width 23.8 mm, (MDC).