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Journal of South American Earth Sciences

journal homepage: www.elsevier.com/locate/jsames

Miocene mollusks from the Simojovel area in Chiapas, southwestern Mexico

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ARTICLE INFO

Article history:
Received 17 October 2009
Accepted 22 April 2010

Keywords:
Mollusca
Miocene
Chiapas
Amber
Mexico

ABSTRACT

The fauna of gastropods and bivalves from the amber-bearing lithostratigraphic units of the Simojovel area, Chiapas is reported, including the description of two new species and one subspecies: *Turbinella maya* new species, *Melongena corona tzeltal* new subspecies and *Agladrillia (Eumetadrillia) vermeiji* new species. Stratigraphic affinities of the previously described species suggest an Early Miocene age for the Mazantic Shale, and a Middle Miocene age for the overlying Balumtum Sandstone. One specimen of gastropod, with a relatively large piece of amber attached to the adaperatural part of the shell is representative for an Early Miocene age and estuarine paleoenvironmental interpretation for the Mazantic Shale. Mollusca, Miocene, Chiapas, Amber, Mexico.

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1. Introduction

The purpose of this paper is to report and describe the gastropod and bivalve fauna from the Lower and Middle Miocene in Chiapas, in the southwestern part of Mexico. Two new species and one subspecies are described. Previous works devoted to the description of mollusks for that region include Böse (1905); turritellid gastropods by Allison (1967), and Allison and Adegoke (1969). Perrilliat et al. (2004) informally reported gastropods and bivalves from the Simojovel area. The study fauna was collected from the following localities near Simojovel, Chiapas: locality IGM 2023, locality IGM 2024, El Pistón, Los Pocitos, locality Simojovel, locality Huitiupan and locality Km 0 + 1560 Simojovel (Fig. 1). The fauna is represented by 14 genera of the gastropod families Cerithiidae, Turritellidae, Strombidae, Xenophoridae, Cypraeidae, Turbinellidae, Buccinidae, Olividae, Marginellidae, Mitridae, Turridae, Conidae, Terebridae and Architectonicidae, and by 17 genera of the bivalve families Mytilidae, Pectinidae, Lucinidae, Astartidae, Cardiidae, Tellinidae, Veneridae, Corbulidae, Hiatellidae, Pholadomyidae and Gryphaeidae. In addition to two new species and one new subspecies of gastropod, the following species of mollusks were determined (for illustration see Table 1 and Figs. 4 and 5): *Turritella* group of *T. altilira* Conrad, 1857, *Xenophora delecta* (Guppy, 1876), *Cypraea (Erosaria)* cf. *C. (E.) aliena* (Schilder, 1939), *Oliva* cf. *O. dimidiata* Pilsbry and Johnson, 1917, *Persicula* cf. *P. zuliana* (F. Hodson, 1927), *Mitra (Tiara) henekeni illacidata* Woodring, 1928, *Conus*

bravoii Spieker, 1922; bivalves: *Lithophaga (Lithophaga) nigra* (D'Orbigny, 1853), *Leptopecten* cf. *L. ecnomius* Woodring, 1982, *Nodipecten denaius?* Woodring, 1982, *Lucina (Lepilucina) gratis* Olsson, 1964, *Linga podagrinus alarantus* Woodring, 1925, *Trachycardium (Dallocardia)* cf. *T. (D.) phlyctaena* (Dall, 1900), *Trigoniocardia (Apiocardia)* cf. *T. (A.) aminensis* (Dall, 1900), *Dosinia (Dosinia) delicatissima* Brown and Pilsbry, 1913, *Clementia (Clementia) dariena dariena* (Conrad, 1855), *Cyclinella cyclica* (Guppy, 1866), *Caryocorbula sarda* (Dall, 1898), *Panopea parawhitfieldi* (Gardner, 1928), and *Hytotissa* cf. *H. guppyi* (Woodring, 1925). Their occurrence on the studied localities, along with those specimens which were only identified at supraspecific level is given on Table 1. Table 2 illustrates geographic distribution of previously described species in regions outside Chiapas.

Locality IGM 2023 is Campo Alegre, near Simojovel, Huitiupan County, at 17°06'46" N and 92°42'08" W, with gastropods, bivalves and insects in amber. Locality IGM 2024 is Santa Catarina las Palmas, 9 km (N 65°) from Simojovel, on N side of Valle del río Ancora, at 17°11'10"N and 92°40'04" W, with corals, gastropods and bivalves. El Pistón locality is found 4 km SW of Huitiupán, at 17°08'32"N and 92°38'38" W, with gastropods, bivalves and crustaceans. Los Pocitos locality is found 2 km NE of Simojovel, at 17°08'53"N and 92°43'45"W, with gastropods. Bivalves, insects in amber and crustaceans. Simojovel de Allende is found 126 km NNW of Tuxtla Gutiérrez, on Federal Highway 195, to reach road that leads to Puerto Caté; State Highway 173 leads from Puerto Caté to Simojovel. Outcrop is found at 17°10'02"N and 92°42'05", with gastropods, bivalves and crustaceans. Huitiupán locality is found 1 km E of Huitiupán town, at 17°08'06"N and 92°40'55"W, with

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