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THE LAND AND FRESHWATER GASTROPODS COLLECTED IN CUBA BY M.G. RUTTEN

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ABSTRACT

While making geological studies in Cuba during 1933 Recent gastropods were collected by M.G. Rutten and H.J. MacGillavry in the provinces of Pinar del Rfo, Las Villas, and Camagüey. The collection of 54 species and subspecies is stored in the Zoölogisch Museum in Amsterdam. Some new locality records are mentioned. The systematical place and the distribution of most species is discussed.

INTRODUCTION

In 1933 Professor L.M.R. Rutten of the University of Utrecht made a geologic expedition with students to Cuba. Shells were collected during this expedition by M.G. Rutten, who is at present Professor of Geology at the University of Utrecht. Some additional lots were collected by H.J. MacGillavry, then also a student with the expedition, at present Professor of Paleontology at the University of Amsterdam.

The shells which they collected are mainly dead specimens, some apparently taken along the river banks in drift. Hence not all the locality records can be taken as exact. However, the data can be used in general ways to add some details of interest to our knowledge of the distributional pattern of the species. The opportunity is also taken in this report to make several observations on the status of some named forms. A few lots of unidentifiable, generally immature specimens, are omitted.

This assemblage of shells, collected at random, demonstrates again the unparalleled richness of the Cuban land shell fauna. The collection contains representatives of 16 families, comprising 32 genera and 54 species and subspecies. The shells were collected near inhabited areas and generally at some distance from the hills - called "cerros" and "mogotes" - where most of the species live.

Rutten collected in 14 areas in three of Cuba's six provinces. Most collections were made in Pinar del Rfo, the westernmost province (fig. 1). All the shells cited are deposited in the Zoölogisch Museum in Amsterdam.

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GASTROPODA PROSOBRANCHIA

HELICINIDAE

Semitrochatella elongata (Orbigny)

Helicina elongata Orbigny, 1842, Mollusques (in) Sagra, Hist. phys., polit. nat. Ile de Cuba, 1 : 251, pl. 20 figs. 16 - 18.

Pinar del Rfo (City): 7 specimens.

This species is confined to Pinar del Rfo Province. It was formerly placed in the subgenus *Troschelviana* H.B. Baker, 1922, but Aguayo & Jaume (1958 : 102) consider it a member of their new genus *Semitrochatella*, 1958, into which are placed the species having a Vianini-like shell but a *Helicininae*-like radula.

Eutrochatella (Ustronia) acuminata acuminata (Poey)

Helicina acuminata (Velásquez MS) Poey, 1851, Mem. Hist. nat. Isla de Cuba, 1 112, pl. 5 figs. 13, 14.

San Diego de los Baños: 8 specimens.

This is a rather large, thin shelled species from western Pinar del Rfo Province. *E. remota* (Poey, 1858) is a synonym. Though at their extremes the two forms differ radically, the intervening area possesses so many intergrades that clear division on morphological grounds proves impossible.

Eutrochatella (Ustronia) acuminata columellaris (Gundlach)

Helicina columellaris Gundlach, 1856, Malakozoologische Blätter, 3 : 39.

Pinar del Rfo (City): 1 specimen.

This subspecies differs from the nominate form in possessing a yellow or orange-yellow blotch in the columellar region. It lives separately from *a. acuminata*, occupying the easterly area of the range whereas the nominate form occupies the western part. The present locality, if verified, represents a westward extension of the range.

Eutrochatella (Troschelviana) petitiana (Orbigny)

Helicina petitiana Orbigny, 1842, Mollusques (in) Sagra, Hist. phys., polit. nat. Ile de Cuba, 1 : 247, pl. 20 figs. 1 - 3.

San Blas: 19 specimens.

Viana regina regina (Morelet)

Helicina regina Morelet, 1849, *Testacea Novissima*, 1 : 19.

Rio Hondo : 3 specimens (1 male, 2 females).

This is near the extreme eastern end of the range of the species. The present specimens might be adventitious. The male shell is distinguished from the female by the presence of a rather deep, v-shaped notch on the upper part of the peristome.

Alcacia hispida (Pfeiffer)

Helicina hispida Pfeiffer, 1839, *Wiegmann Arch. Naturg.*, 5 (= 1) : 355.

Artemisa : 3 specimens.

Alcacia minima (Orbigny)

Helicina minima Orbigny, 1842, *Mollusques (in) Sagra, Hist. phys., polit. nat. Ile de Cuba*, 1 : 253, pl. 21 figs. 7 - 9.

Camagüey : 3 specimens.

Alcacia rotunda (Orbigny)

Helicina rotunda Orbigny, 1842, *ibid.*, 1 : 252, pl. 21 figs. 1 - 3.

Artemisa : 1 specimen; Rio Hondo : 9 specimens.

According to Jaume (1945 : 75) this species occurs "en toda la region" about the Pan de Guajabón. The present locality is not far away.

Emoda sagraiana (Orbigny)

Helicina sagraiana Orbigny, 1842, *ibid.*, 1 : 240, pl. 18 figs. 12, 13 (not 14).

Rio Hondo : 10 dead specimens.

This species is confined to Pinar del Rio Province.

Emoda submarginata (Gray)

Helicina submarginata Gray, 1825, *Zool. Journ.*, 1 : 68, pl. 6 fig. 11.

La Mulata : 3 specimens.

The present locality is very near the western limit of the range of the species. Unlike most of its congeners, *submarginata* occurs in every one of the six provinces of Cuba.

Helicina adpersa Pfeiffer

Helicina adpersa Pfeiffer, 1839, *Wiegmann Arch. Naturg.*, 5 (= 1) : 354.

Rio Hondo : 4 specimens; San Blas : 5 specimens.

This species is widely spread throughout the entire western part of the island from Las Villas Province westward. It occurs in a large number of color varieties, some of which have been named.

It lives generally on palm trees.

Proserpina depressa (Orbigny)

Odontostoma depressa Orbigny, 1842, Mollusques (in) Sagra, Hist. phys., polit. nat. Ile de Cuba, 1 : 238, pl. 18 figs. 4, 7.

Rfo Hondo: 4 specimens.

This species is widely spread in Pinar del Rfo Province.

CYCLOPHORIDAE

Farcimen bituberculatum (Sowerby)

Cyclostoma bituberculatum Sowerby, 1850, Thesaurus Conchyliorum, 1 : 164, pl. 31a figs. 290, 291 (supplement).

San Blas: 1 specimen.

This species, according to Torre & Bartsch (1942 : 15), is confined to the southern portion of Las Villas Province.

Farcimen subventricosum Torre & Bartsch

Farcimen subventricosum Torre & Bartsch, 1942, Cyclophorid Operc. Land Moll. America: 32, pl. 6 figs. 7 - 9.

San Diego de los Baños: 2 specimens.

According to the classification of Torre & Bartsch (l.c.) these specimens should be placed in their subspecies *multistriatum* but the shells of that subspecies are larger than the present ones. Despite the "splitting" activities for which the work of Torre & Bartsch is well known, it might be best to designate all *Farcimen* from around San Diego de los Baños as members of a single, variable species.

Farcimen spec.

Artemisa: 2 juvenile specimens.

These specimens retain merely a few of the upper whorls. Determination is generally impossible without an examination of the labial complex.

CHONDROPOMIDAE

Troschelvindex candeanum candeanum (Orbigny)

Cyclostoma candeanum Orbigny, 1842, Mollusques (in) Sagra, Hist. phys., polit. nat. Ile de Cuba, 1 : 261, pl. 22 figs. 15, 17.

Guanajay: 4 specimens.

Torre & Bartsch (1941 : 331) distinguish between a western "race" near Habana and an eastern one near Sagua la Grande, Santa Clara (= Las Villas) Province. The present specimens, coming from further west in Pinar del Rfo Province and consisting of dead specimens, do not bear out the

morphological distinctions noted by these two authors.

Troschelvindex candeanum fallax (Torre & Bartsch)

Annularia (*Troschelvindex*) *candeanum fallax* Torre & Bartsch, 1941, Cuban Operc. Moll. Family Annulariidae: 331, pl. 37 fig. 3.

Santa Clara: 7 specimens; Soledad: 8 specimens.

See remarks above.

Troschelvindex incultum (Poey)

Cyclostoma incultum Poey, Mem. Hist. nat. Isla de Cuba, 1: 98, pl. 8 figs. 4, 5.

Rfo Agabama: 6 specimens.

Torre & Bartsch (1941 : 332) found their specimens nearby at La Vigfa, Trinidad.

Troschelvindex spec.

Rfo Agabama: 3 specimens; Camagüey: 2 specimens.

Chondropoma violaceum (Pfeiffer)

Cyclostoma aviolaceum Pfeiffer, 1851, Proc. zool. Soc. London, 1851: 245.

Rfo Agabama: 1 specimen.

See remarks under following species.

Chondropoma violaceum vigiaense (Torre & Bartsch)

Chondrothyrium violaceum vigiaense Torre & Bartsch, 1938, Cuban Operc. Land Shells subfamily Chondropominae: 400, pl. 28 fig. 1.

San Blas: 4 specimens.

This doubtful subspecies is retained provisionally. The "subspecies" of *Chondropoma violaceum* (Pfeiffer, 1851), are confined to the southern coast of Las Villas Province. Torre & Bartsch (1938 : 397 - 403) divided this group into no fewer than 19 "series of races" which they designated as subspecies. Few of these, however, were defined clearly enough to be determined without knowledge of their exact provenience. The genus *Chondrothyrium* was based upon minor shell features.

Chondropoma majusculum crassilabris (Torre & Bartsch)

Annularia (*Annularita*) *majuscula crassilabris* Torre & Bratsch, 1941, Cuban Operc. Land Moll. Family Annulariidae: 325, pl. 36 fig. 2.

Rfo Hondo: 10 specimens.

This subspecies is one of the "races" into which Torre & Bartsch divided *Chondropoma majusculum* (Morelet). The name is kept here because the specimens come from the locality cited by Torre & Bartsch. H.B. Baker (1924 : 91) showed that *Annularia Schumacher*, 1817, is a synonym of *Cyclophorus* Montfort, 1810.

Chondropoma spec.

Rfo Hondo: 3 specimens; San Blas: 17 specimens; Camagüey: 3 juv.

Rhytidothyra bilabiata (Orbigny)

Cyclostoma bilabiata Orbigny, 1842, Mollusques (in) Sagra, Hist. phys., polit. nat. Ile de Cuba, 1: 258, pl. 22 figs. 3, 4, 5, 8, 8'.

Pinar del Rfo (City): 1 specimen.

The type-locality as selected by Torre & Bartsch (1941 : 221) is Guajaibón, some distance from the present locality.

Opisthosiphon greenfieldi Torre & Bartsch

Opisthosiphon greenfieldi Torre & Bartsch, 1941, Cuban Operc. Land Moll. family Annulariidae: 171, pl. 12 fig. 1.

Camagüey: 1 specimen.

The authors described their specimens from Sitio Afuera, S end of Paso de la Escalera, Cubitas Mts. The present dead specimen may have been transported from there by wind or water.

Opisthosiphon spec.

Artemisa: 16 specimens; Camagüey: 9 specimens.

Eutudorops torquatus (Poey)

Cyclostoma torquata (Gutierrez MS) Poey, 1858, Mem. Hist. nat. Isla de Cuba, 2: 34, pl. 4 fig. 2.

Santa Clara: 8 specimens.

This species is confined to Las Villas Province where it undergoes many variations. The female, as in most chondropomids is larger than the male, a fact overlooked by Torre & Bartsch in their monograph.

THIARIDAE

Hemisinus brevis (Orbigny)

Melania brevis Orbigny, 1842, Mollusques (in) Sagra, Hist. phys., polit. nat. Ile de Cuba, 2: 10, pl. 10 fig. 15.

Pinar del Rfo (City): 8 specimens.

The genus *Hemisinus* in Cuba is confined to Pinar del Rfo Province. It is also known from the rivers and streams of Jamaica.

Hemisinus cubanianus torrei (Aguayo)

Melania torrei Aguayo, 1935, Mem. Soc. Cubana Hist. nat., 9: 115. New name for *Melania ornata* Poey, 1854, non Michaud, 1828.

Bahfa Honda: 17 specimens; Pinar del Rfo (City): 1 specimen; San Diego de los Baños: 15 specimens.

This species according to Aguayo & Jaume (1947 : 114) is confined to the rivers of the central part of Pinar del Rfo Province.

GASTROPODA PULMONATA

PHYSIDAE

Physa cubensis Pfeiffer

Physa cubensis Pfeiffer, 1839, Wiegmann Arch. Naturg., 5 (1) : 354.

Santa Clara: 32 specimens.

This fresh water pulmonate occurs throughout the Antilles. Aguayo & Jaume (1947 : 115) report it as "muy abundante en rfos y lagunas".

LYMNAEIDAE

Lymnaea cubensis Pfeiffer

Limnaea cubensis Pfeiffer, 1839, *ibid.*, 5 (1) : 354.

Camagfey: 2 specimens; Santa Clara: 2 specimens.

The original description of this species and the previous one are cited by Aguayo & Jaume as 5 : 354. However, the 5 refers to the fifth year of the Archiv, and the volume is actually volume 1.

PLANORBIDAE

Biomphalaria havanensis (Pfeiffer)

Planorbis havanensis Pfeiffer, 1839, *ibid.*, 5 (1) : 354.

Rfo Hondo: 1 specimen.

We here adopt the views of Barbosa et al. (1968) and synonymize *Tropicorbis* Brown & Pilsbry, 1914, into which genus this species has usually been placed. Barbosa et al. (1968 : 53) give a list of specific synonyms under which this species has been known.

SUBULINIDAE

Subulina octona (Bruguière)

Bulimus octonus Bruguière, 1792, *Encyclop. méth.*, 1 : 325.

Artemisa: 3 specimens; Guanajay: 7 specimens; La Gfira: 6 specimens.

This species is widely spread throughout the American tropics and subtropics.

Lamellaxis micrus (Orbigny)

Helix micra Orbigny, 1835, *Synop. terrest. fluv. Moll. Mag. Zool.*, 5 : Class V, no.

61: 9.

2 km NE of Central Senado, Camagüey, H.J. MacGillavry leg., 2 May 1933: 2 specimens.

This species is likewise widely spread in the tropics and subtropics.

Obeliscus homalogyrus (Shuttleworth in Pfeiffer)

Bulimus homalogyrus Shuttleworth in Pfeiffer, 1853, Martini - Chemnitz, Syst. Conchylien - Cabinet, 1, sect. 13, part 1: 91, pl. 31 figs. 9, 10.

Santa Clara: 2 specimens; Camagüey: 13 specimens; Rfo Agabama: 12 specimens.

The last named locality appears to be near the type-locality of the species at the finca "Magua" near Trinidad. The largest specimen in the present series from this locality measures 20.2 x 4.5 mm, larger than any of the measurements given by Pilsbry (1906: 263).

OLEACINIDAE

Oleacina oleacea straminea (Deshayes in Férussac)

Achatina straminea Deshayes in Férussac, 1851, Hist. nat. Moll. terrest. fluv., 2: 172, pl. 123 figs. 11, 12.

Rfo Agabama: 3 specimens; Rfo Hondo: 6 specimens.

This species ranges across the entire island from Pinar del Rfo Province through Oriente.

Oleacina subulata Pfeiffer

Oleacina subulata Pfeiffer, 1839, Wiegmann Arch. Naturg., 5 (1): 352.

Rfo Hondo: 9 specimens; Artemisa: 3 specimens; Guanajay: 7 specimens; Rfo Agabama: 2 specimens; Santa Clara: 1 specimen.

This is another small oleacinid of wide distribution in the island.

Oleacina spec.

Camagüey: 2 specimens.

These specimens were determined by comparison with a series donated by Torre to the MCZ. This latter lot bears an apparently unpublished name. I hesitate to describe the species as new on the basis of the few specimens available, nor do I wish to create a nomen nudum.

ORTHALICIDAE

Liguus fasciatus (Müller)

Buccinum fasciatum Müller, 1774, Verm. terrest. fluv., 2: 145.

Trinidad: 1 specimen; Camagüey City: 1 specimen.

The specimens were too badly weathered to recognize as a member of one of the numerous subspecies into which this species has been divided.

Liguus flammellus flammellus Clench

Liguus flammellus flammellus Clench, 1934, Occ. Pap. Boston Soc. nat. Hist., 8 : 119, pl. 6 fig. 7.

Pinar del Rfo: 3 weathered specimens.

This beautiful species of tree snail is found only in Pinar del Rfo Province. The subspecies occurs in the vicinity of Viñales and nearby San Vicente. Hence these specimens are adventitious, probably transported by land crabs.

UROCOPTIDAE

Gongylostoma elegans elegans (Pfeiffer)

Clausilia elegans Pfeiffer, 1839, Wiegmann Arch. Naturg., 5 (1) : 353.

Rfo Agabama: 8 specimens, some taken live.

Gongylostoma elegans subelegans Pilsbry

Gongylostoma elegans subelegans Pilsbry, 1903, Manual Conchology, (2) 15 : 222, pl. 53 figs. 47 - 50.

Rfo Hondo: 8 specimens.

This form, designated "variety" by Pilsbry, merits subspecific status since, occurring in Pinar del Rfo Province, it is geographically separated from the nominate form which occurs in Matanzas (Pilsbry, 1903 : 219, 222). The locality of the present shells is very near the type-locality of the subspecies at Artemisa.

"Urocoptidae" species

The collection contains five lots of urocoptids which at present cannot be determined. Because of the influence of Dr. Carlos de la Torre y Huerta, the dean of Cuban shell experts, especially during his later years, no new forms were described, as de la Torre asked students to wait till his manuscript appeared, where most of the new forms were to be named and described. "Lo tengo en manuscrito", was the doctor's repeated statement. This unpublished manuscript is now in the United States National Museum in Washington and its appearance in print in the near or even distant future is extremely doubtful. A revision of the incredibly rich urocoptid fauna of Cuba, a tremendous task, is badly needed. Where, in the present paper, I do assign names to a few of the urocoptids in the present collection, I do so on the basis of Pilsbry's monograph in the Manual of Conchology (1903).

POLYGYRIDAE

Polygyra lingulata (Deshayes in Férussac)

Helix lingulata Deshayes in Férussac, 1839, Hist. nat. gen., Moll., 1 : 6, pl. 69 D fig. 1.

Artemisa: 4 mature, 3 immature specimens.

Helix paludosa Pfeiffer, 1839, a name earlier in use, is preoccupied by Da Costa, 1778. The present specimens are a new record for this species which is generally known from eastern Cuba and the Isle of Pines. Nevertheless, the type-locality is Havana.

Praticolella griseola (Pfeiffer)

Helix griseola Pfeiffer, 1841, Symb. Hist. Heliceorum, 1 : 41.

Guanajay: 1 immature, 3 mature specimens; La Gũira: 17 specimens; Camagũey City: 3 specimens.

Pilsbry (1940 : 692) thought this species was naturalized in Cuba from Vera Cruz, Mexico or Key West, Florida. He reported it (1940 : 690) only from Havana Province. Hence the present record shows that this species has extended and undoubtedly is still extending its rangs.

Praticolella spec.

Rfo Agabama: 1 specimen; Soledad: 1 juv. specimen.

SAGDIDAE

Suavites raripila (Morelet)

Helix raripila Morelet, 1851, Testacea novissima, 2 : 8.

Rfo Hondo: 3 specimens.

Aguayo & Jaume (1947 : 131) also reported this species from Trinidad in Las Villas Province.

Suavitus spec.

Santa Clara: 8 specimens.

Lacteoluna selenina (Gould)

Helix selenina Gould, 1848, Proc. Boston Soc. nat. Hist., 3 : 38.

Camagũey: 8 specimens; Santa Clara: 2 specimens.

This is a widely ranging species in southeastern United States as well as in the Antilles. Aguayo & Jaume (1947 : 86) do not report this species from Camagũey.

Hojeda boothiana (Pfeiffer)

Helix boothiana Pfeiffer, 1839, Wiegmann Arch. Naturg., 5 (1) : 351.

Santa Clara: 2 specimens.

CAMAENIDAE

Zachrysia spec.

Artemisa: 2 juveniles; Rfo Hondo: 1 specimen; San Blas: 1 specimen; Rfo Agabama: 4 juveniles.

Some may belong to the species *Z. auricoma* (Férussac, 1822) which Pilsbry (1928 : 599) reported occurs widely west of the western border of Camagũey.

BRADYBAENIDAE
(= FRUTICICOLIDAE)

Bradybaena similaris (Férussac)

Helix similaris Férussac, 1821, Prodome: 43, no. 262; Hist., 1 : 171, pl. 25 B fig. 24, pl. 27 A figs. 1 - 3.

Guanajay: 2 mature, 3 immature specimens.

Aguayo & Jaume (1950 : 668) were not sure of the presence of this species in Cuba. The present record and more recently live colonies in Havana and Marianao have removed all doubt.

HELMINTHOGLYPTIDAE

Jeanneretia bicincta (Menke)

Helix bicincta Menke, 1830, Synop. meth. Molluscorum: 127.

Rfo Hondo: 4 specimens.

As Clench & Aguayo (1951 : 82) pointed out, this name has to replace the better known *multi-striata* Deshayes, 1832. The species occurs from Matanzas through the eastern part of Pinar del Rfo. One of the localities given by Clench & Aguayo (l.c.) is Candelaria, not far from the present locality.

Eurycampta bonplandi (Lamarck)

Helix bonplandi Lamarck, 1799, Animaux sans Vertèbres, 8 : 40.

Rfo Hondo: 4 juvenile specimens.

Eurycampta poeyi (Petit)

Helix poeyi Petit, 1836, Guérin, Mag. Zool., Class V, pl. 74.

San Blas: 1 immature, 2 mature specimens.

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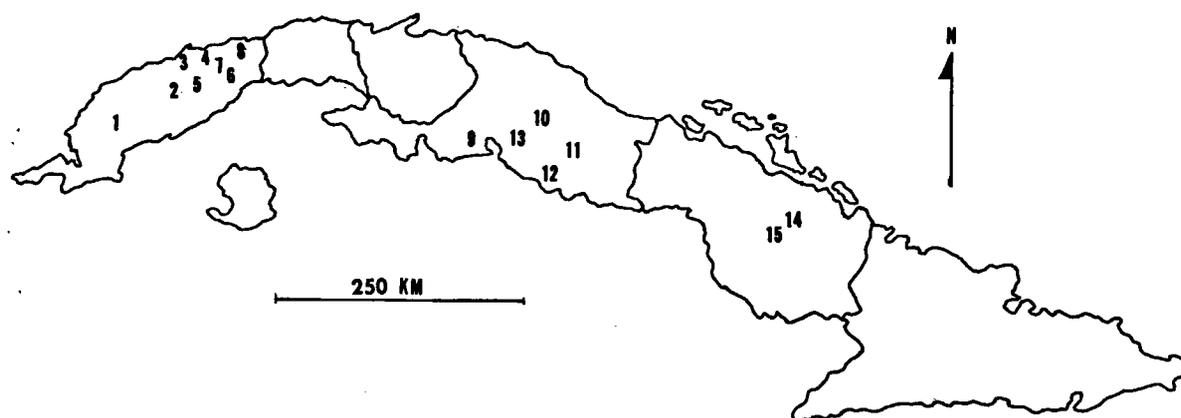


Figure I

The island of Cuba with the localities mentioned in this paper

PINAR DEL RIO PROVINCE

1. Pinar del Rfo City
2. San Diego de los Baños
3. La Mulata
4. Bahía Honda
5. La Gñira
6. Artemisa
7. Rfo Hondo
8. Guanajay

LAS VILLAS PROVINCE

9. San Blas
10. Santa Clara
11. Rfo Agabama
12. Trinidad
13. Soledad

CAMAGŨEY PROVINCE

14. Central Senado
15. CamagŹey City