

ARTÍCULO ORIGINAL

NEW DATA ON THE DISTRIBUTION OF CRABS (DECAPODA: ANOMURA AND BRACHYURA) IN CUBA

Nuevos datos de distribución de cangrejos (Decapoda: Anomura and Brachyura) en Cuba

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ABSTRACT

The taxonomy of Cuban anomuran and braquiuran crabs is very well known. However, as many other invertebrates, the distribution of the species remains uncertain, hiding biogeographical and conservational studies. In this work, we present new data on the distribution of Cuban crabs, occurring in western (Pinar del Río and Matanzas) and eastern provinces, including some protected areas. The distribution of 69 species (13 anomurans and 56 braquiurans) is actualized. The provinces with more records are Guantánamo (42 species) and Holguín (38). All the species from the province of Guantánamo occur in protected areas.

KEY WORDS: biogeography, Caribbean Sea, Crustacea, Decapoda, marine biodiversity.

RESUMEN

La taxonomía de los cangrejos anomuros y braquiuros cubanos es bien conocida. No obstante, como muchos otros invertebrados, la distribución de las especies es incierta, impidiendo realizar estudios biogeográficos y conservacionistas. En este trabajo se presentan nuevos datos sobre la distribución de cangrejos cubanos, que se distribuyen en las provincias occidentales (Pinar del Río y Matanzas) y orientales, incluyendo algunas áreas protegidas. Se actualiza la distribución de 69 especies (13 anomuros y 56 braquiuros). Las provincias con más registros son Guantánamo (42 especies) y Holguín (38). Todas las especies de la provincia Guantánamo se encuentran en áreas protegidas.

PALABRAS CLAVES: biogeografía, Mar Caribe, Crustacea, Decapoda, biodiversidad marina.

INTRODUCTION

The high species richness and singularities of many taxa, characterize the Cuban marine biodiversity. Some marine invertebrates, such as echinoderms, crustaceans, and nematodes, are rather well known (see Abreu-Pérez *et al.*, 2005; Lalana *et al.*, 2005, 2014; Armenteros *et al.*, 2009). Molluscs are a particular group, with about 1 800 recorded species, many of them described in the last decade (see Espinosa *et al.*, 2012, 2015; Espinosa y Ortea, 2016). However, the distribution and ecology of many taxa is understudy, especially crustaceans, and several records are in old papers (*e. g.* Rathbun, 1925, 1937). These reasons make impossible to know the real status of the Cuban carcinofauna, and its biogeographic and conservationist implications.

Diez (2014) listed and actualized the Cuban Brachyura (braquiuran crabs), including 320 species. Unfortunately, some editorial mistakes are evident in this work, and considering other posterior papers is necessary a second update to the checklist. Other problem to solve on this paper, is the real composition of the freshwater crabs (Pseudothelphusidae), because *Pseudothelphusa* Saussure, 1857 not occurs in the Caribbean islands (Capolongo, 2002). In the checklist of the crustaceans from Boca Canasí, Mayabeque province, the local distribution of few anomurans and braquiurans was presented (Barro *et al.*, 2013). The last researches on Cuban crabs have been conducted in eastern Cuba (Diez and Jover, 2013, 2015; Diez, 2015). The anomurans Hippoidea (mole crabs) was checked by Ortiz *et al.* (2013), recording

five species in Cuba. Posteriorly, Ortiz (2015) described *Zygopa lalanai* Ortiz, 2015 from Matanzas. Recently, Diez and Lira (2017) studied the systematics and biogeography of the family Porcellanidae (porcelain crabs), recording 23 species in Cuba. In the present paper, new records on distribution of 69 species of Cuban crabs (Anomura and Brachyura) are presented.

MATERIAL AND METHODS

Field sampling campaigns were conducted in localities of the provinces Pinar del Río (María la Gorda, Península de Guanahacabibes), Las Tunas (Puerto Padre Bay and La Herradura beach), Holguín (Gibara, Naranjo, Nipe, and Levisa Bays, and Esmeralda, Guardalavaca, Punta de Mulas, and Morales beaches), Santiago de Cuba (Las Sardinias, El Guimaral, La Mula, Siboney and Juraguá), and Guantánamo (Taco Bay, Baracoa, and Maisí-Caleta Natural Reserve). Other records are from the available material in the zoology collection of the Museum Charles Ramsdem de la Torre, Universidad de Oriente (Santiago de Cuba).

The identification of the species of Anomura was done checking the very-wide literature (*e. g.* Forest, 1925; Provenzano, 1959, 1961; McLaughlin and Provenzano, 1974; McLaughlin, 1975; García-Gómez, 1982, 1983; Martínez-Iglesias y Gómez, 1989), and Brachyura (*e. g.* Rathbun, 1925, 1930, 1937; Abele and Kim, 1986; Diez and Jover, 2015; Carmona-Suárez and Poupin, 2016). The Brachyura-list was ordered following Ng *et al.* (2008) and the Anomura-list following McLaughlin *et al.* (2010).

RESULTS

SPECIES LIST AND DISTRIBUTION

Order Decapoda Latreille, 1802
 Suborder Pleocynemata Burkenroad, 1963
 Infraorder Anomura MacLeay, 1838
 Superfamily Hippoidea Latreille, 1825
 Family Hippidae Latreille, 1825
 Genus *Hippa* Fabricius, 1787

Hippa testudinaria (Herbst, 1791)

Known distribution in Cuba. María la Gorda (Península de Guanahacabibes), from Gibara to Playa Mejías (Holguín) (Ocaña *et al.*, 2009; Ortiz *et al.*, 2013).

New records. Holguín: Guardalavaca and Esmeralda beaches; Santiago de Cuba: Juraguá, and Las Sardinias.

Superfamily Coenobitoidea Dana, 1851
 Family Coenobitidae Dana, 1851
 Genus *Coenobita* Herbst, 1791

Coenobita clypeatus Herbst, 1791

Known distribution in Cuba. Cojímar, La Habana (Ortiz, 2001); several localities in the southern of Península de Guanahacabibes, Pinar del Río (Varela *et al.*, 2003); María la Gorda, Península de Guanahacabibes (Lalana *et al.*, 2007); Boca de Canasí, Mayabeque (Barro *et al.*, 2013); Santiago de Cuba (Diez and Jover, 2015).

New records. North-eastern littoral between Puerto Padre Bay (Las Tunas) and Baracoa (Guantánamo); Guantánamo: Ecological Reserve Maisí-Caleta.

Family Diogenidae Ortmann, 1892
 Genus *Calcinus* Dana, 1851

Calcinus tibicen (Herbst, 1791)

Known distribution in Cuba. Juan González and Cantiles Cays, Batabanó Gulf (Martínez-Iglesias and García-Raso, 1999); Santiago de Cuba (Diez and Jover, 2015).

New records. Las Tunas: La Herradura beach; Holguín: Gibara, Naranjo, and Nipe Bays; Guantánamo: Taco Bay, Baracoa.

Genus *Clibanarius* Dana 1852

Clibanarius antillensis Stimpson, 1862

Known distribution in Cuba. María la Gorda, Península de Guanahacabibes, Pinar del Río (Lalana *et al.*, 2007); Santiago de Cuba (Diez and Jover, 2015).

New records. Guantánamo: Taco Bay, Baracoa.

Clibanarius sclopetarius (Herbst, 1796)

Known distribution in Cuba. Cojímar, La Habana (Ortiz, 2001); María la Gorda, Península de Guanahacabibes, Pinar del Río (Lalana *et al.*, 2007); Santiago de Cuba (Diez and Jover, 2015).

New records. Holguín: Gibara Bay, Gibara; Guantánamo: Taco Bay, Baracoa.

Clibanarius tricolor (Gibbes, 1850)

Known distribution in Cuba. Cojímar, La Habana (Ortiz, 2001); Playa Antonio, Península de Guanahacabibes, Pinar del Río (Varela *et al.*, 2003); María la Gorda,

Península de Guanahacabibes (Lalana *et al.*, 2007); Boca de Canasí, Mayabeque (Barro *et al.*, 2013); several localities in Batabanó Gulf (Martínez-Iglesias y Alcolado, 1990); Santiago de Cuba (Diez and Jover, 2015).

New records. Las Tunas: La Herradura beach; Holguín: Gibara and Nipe Bays; Guantánamo: Taco Bay, Baracoa, and Ecological Reserve Maisí-Caleta.

Genus *Dardanus* Paulson, 1875

Dardanus venosus (H. Milne-Edwards, 1848)

Known distribution in Cuba. Juan González and Cantiles Cays, Batabanó Gulf (Martínez-Iglesias and García-Raso, 1999); Santiago de Cuba (Diez and Jover, 2015).

New records. Pinar del Río: María la Gorda; Guantánamo: Taco Bay, Baracoa.

Genus *Petrochirus* Stimpson, 1858

Petrochirus diogenes (Linnaeus, 1758)

Known distribution in Cuba. Batabanó Gulf (Martínez-Iglesias y Alcolado, 1990); Santiago de Cuba (Diez and Jover, 2015).

New records. Guantánamo: Taco Bay, Baracoa.

Genus *Paguristes* Dana, 1852

Paguristes cadenati Forest, 1954 (Fig. 1A and 1B)

Known distribution in Cuba. Juan González Reef, Batabanó Gulf (Martínez-Iglesias *et al.*, 1993); Juan González and Diego Pérez Cays, Batabanó Gulf (Martínez-Iglesias and García-Raso, 1999).

New records. Pinar del Río: María la Gorda; Guantánamo: Taco Bay, Baracoa, and Ecological Reserve Maisí-Caleta.

Paguristes puncticeps Benedict, 1901 (Fig. 1C)

Known distribution in Cuba. Juan González and Diego Pérez Cays, Batabanó Gulf (Martínez-Iglesias y Alcolado, 1990; Martínez-Iglesias and García-Raso, 1999); Cayo Levisa, Pinar del Río (Ibarzábal *et al.*, 2002); Juan García Reef, Batabanó Gulf (Manjón-Cabeza *et al.*, 2012).

New records. Pinar del Río: María la Gorda; Santiago de Cuba: Las Sardinias, El Guaimaral, and Siboney. Guantánamo: Ecological Reserve Maisí-Caleta.

Genus *Iridopagurus* Saint Laurent-Dechance, 1966

Iridopagurus reticulatus García-Gómez, 1983 (Fig. 1D)

Known distribution in Cuba. Diego Pérez and Cantiles Cays, Batabanó Gulf (Martínez-Iglesias *et al.*, 1993; Martínez-Iglesias and García-Raso, 1999).

New records. Pinar del Río: María la Gorda; Santiago de Cuba: Las Sardinias.

Family Paguridae Latreille, 1802

Genus *Pagurus* Fabricius, 1775

Pagurus brevidactylus (Stimpson, 1862) (Fig. 1E)

Known distribution in Cuba. Juan González, Diego Pérez, and Cantiles Cays, Batabanó Gulf (Martínez-Iglesias and García-Raso, 1999).

New records. Santiago de Cuba: Santiago de Cuba Bay; Guantánamo: Taco Bay, Baracoa.

Pagurus maclaughlinae García-Gómez, 1982 (Fig. 1F)

Known distribution in Cuba. Unknown.

New records. Santiago de Cuba: El Guaimaral.

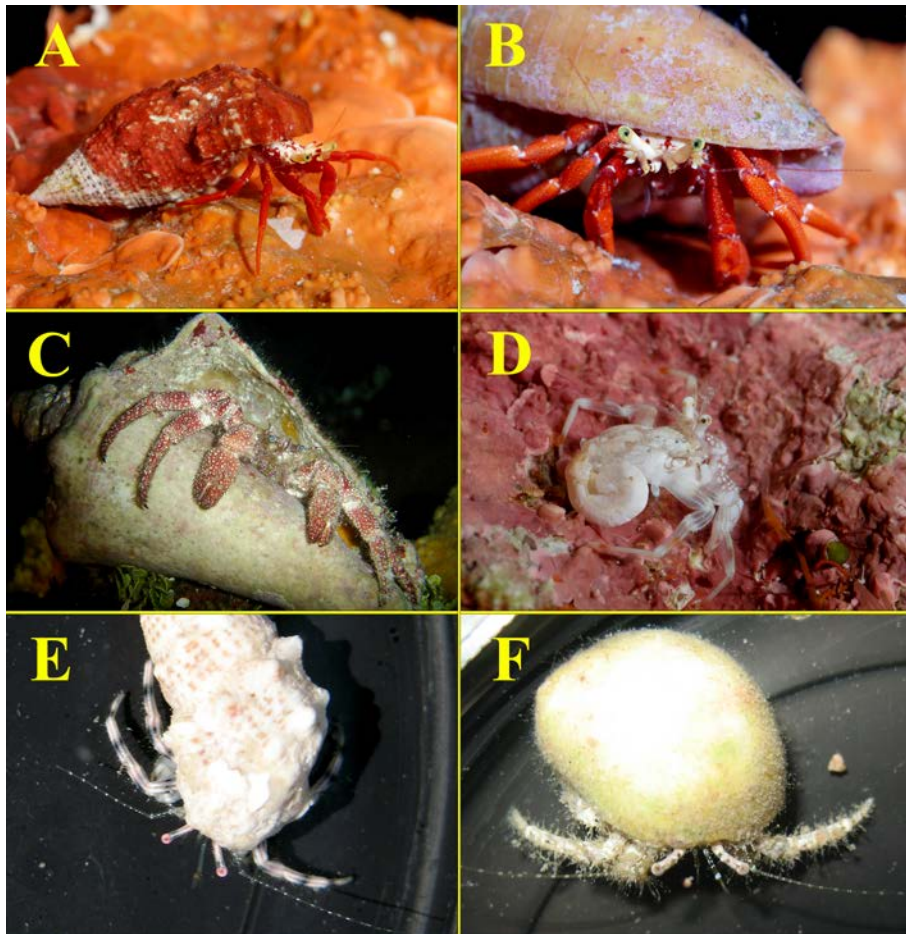


Fig. 1. Anomuran crabs. A-B: *Paguristes cadenati*, C: *Paguristes puncticeps*, D: *Iridopagurus reticulatus*, E: *Pagurus brevidactylus*, and F: *Pagurus maclaughlinae*. A-D specimens from Guanahacabibes, E-F specimens from Las Sardinias.

Infraorder Brachyura Latreille, 1803
 Section Podotremata Guinot, 1967
 Superfamily Dromioidea De Haan, 1833
 Family Dromiidae De Haan, 1833
 Subfamily Dromiinae De Haan, 1833
 Genus *Dromia* Weber, 1795

Dromia erythropus (George Edwards, 1771) (Fig. 2A)

Known distribution in Cuba. Unknown.

New records. Pinar del Río: María la Gorda.

Section Eubrachyura Saint Laurent, 1980

Subsection Heterotremata Guinot, 1977

Superfamily Aethroidea Dana, 1851

Family Aethridae Dana, 1851

Genus *Hepatus* Latreille, 1802

Hepatus pudibundus (Herbst, 1785)

Known distribution in Cuba. Cojímar, La Habana (Ortiz, 2001); Ensenada de la Broa, Gulf of Batabanó (Martinez-Iglesias y Gómez, 1986); Santiago de Cuba (Diez and Jover, 2015).

New records. Pinar del Río: María la Gorda; Holguín: Gibara, Nipe and Levisa Bays; Guantánamo: Taco Bay, Baracoa.

Superfamily Calappoidea De Haan, 1833

Family Calappidae De Haan, 1833

Genus *Calappa* Weber, 1795

Calappa flammea (J.F.W. Herbst, 1794)

Known distribution in Cuba. Santiago de Cuba (Diez and Jover, 2015).

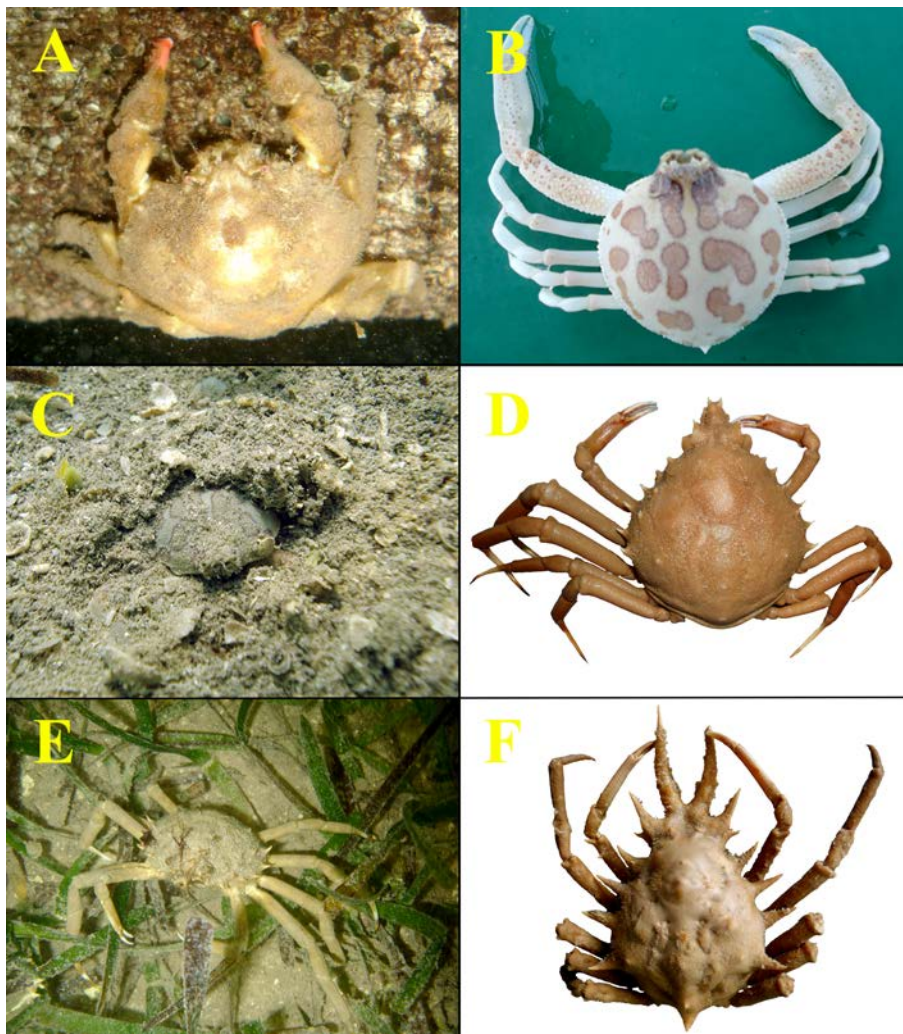


Fig. 2. Braquiuran crabs. A: *Dromia erythropus* from Guanahacabibes, B-C: *Persephona mediterranea* from Taco Bay, *Libinia dubia* (D from Júcaro and E from Guanahacabibes), and F: *Stenocionops furcatus* from Nuevitas Bay.

New records. Pinar del Río: María la Gorda; Guantánamo: Taco Bay.

Calappa gallus (Herbst, 1803)

Known distribution in Cuba. Punta del Este, Isla de la Juventud (Valdés-Muñoz, 1986); Cantiles Cay, Batabanó Gulf (Martínez-Iglesias and García-Raso, 1999); Cojímar, La Habana (Ortiz, 2001); Santiago de Cuba (Diez and Jover, 2015).

New records. Pinar del Río: María la Gorda; Guantánamo: Taco Bay.

Calappa ocellata Holthuis, 1958

Known distribution in Cuba. Cantiles Cay, Batabanó Gulf (Martínez-Iglesias and García-Raso, 1999); Cojímar, La Habana (Ortiz, 2001).

New records. Santiago de Cuba: Las Sardinias; Guantánamo: Taco Bay.

Superfamily Eriphioidea MacLeay, 1838

Family Eriphidae MacLeay, 1838

Genus *Eriphia* Latreille, 1817

Eriphia gonagra (Fabricius, 1781)

Known distribution in Cuba. El Resguardo, Península de Guanahacabibes, Pinar del Río (Varela *et al.*, 2003); Cojímar, La Habana (Ortiz, 2001); Santiago de Cuba (Diez and Jover, 2015).

New records. Las Tunas: La Boca, Puerto Padre; Holguín: Morales beach, Banes.

Family Menippidae Ortmann, 1893

Genus *Menippe* De Haan, 1833

Menippe mercenaria (Say, 1818)

Known distribution in Cuba. Ensenada de la Broa, Mayabeque (Ros y Suárez, 1980); Santiago de Cuba (Diez and Jover, 2015).

New records. Holguín: Gibara Bay.

Menippe nodifrons Stimpson, 1859

Known distribution in Cuba. Unknown.

New records. Holguín: Juan Vicente beach, Mayarí.

Superfamily Leucosioidea Samouelle, 1819

Family Leucosiidae Samouelle, 1819

Genus *Persephona* Leach, 1817

Persephona mediterranea (Herbst, 1794) (Fig. 2B and 2C)

Known distribution in Cuba. Batabanó Gulf and northcentral coast (Martínez-Iglesias y Gómez, 1986; Martínez-Iglesias y Alcolado, 1990; Martínez-Iglesias, 2007).

New records. Matanzas: Matanzas Bay; Guantánamo: Taco Bay.

Genus *Speloeophorus* A. Milne-Edwards, 1865

Speloeophorus pontifer (Stimpson, 1871)

Known distribution in Cuba. Santiago de Cuba (Diez and Jover, 2015).

New records. Pinar del Río: María la Gorda.

Superfamily Majoidea Samouelle, 1819

Family Epiplatidae MacLeay, 1838

Subfamily Pisinae Dana, 1851

Genus *Libinia* Leach, 1815

Libinia dubia (H. Milne-Edwards, 1834) (Fig. 2D and 2E)

Known distribution in Cuba. Northeastern of Isla de la Juventud (Martínez-Iglesias y Gómez, 1986); Batabanó Gulf and northcentral coast (Martínez-Iglesias y Alcolado, 1990; Martínez-Iglesias, 2007).

New records. Pinar del Río: María la Gorda; Camagüey: Júcaro.

Subfamily Tychinae Dana, 1851

Genus *Pitho* Bell, 1835

Pitho aculeata (Gibbes, 1850)

Known distribution in Cuba. Diego Pérez, and Cantiles Cays, Batabanó Gulf (Martínez-Iglesias y Gómez, 1986; Martínez-Iglesias y Alcolado, 1990; Martínez-Iglesias and García-Raso, 1999).

New records. Holguín: Naranjo Bay.

Pitho lherminieri (Schramm, 1867)

Known distribution in Cuba. Punta del Este, Isla de la Juventud (Valdés-Muñoz, 1986); Ensenada de la Broa, Juan González, Diego Pérez, and Cantiles Cays, Batabanó Gulf, southeastern and northwestern of Isla de la Juventud (Martínez-Iglesias y Gómez, 1986; Martínez-Iglesias and García-Raso, 1999); several localities in Batabanó Gulf (Martínez-Iglesias y Alcolado, 1990); Santiago de Cuba (Diez and Jover, 2015).

New records. Pinar del Río: María la Gorda.

Family Inachidae MacLeay, 1838

Genus *Stenorhynchus* Lamarck, 1818

Stenorhynchus seticornis (Herbst, 1788)

Known distribution in Cuba. Punta del Este, Isla de la Juventud (Valdés-Muñoz, 1986); Diego Pérez and Cantiles Cays, Batabanó Gulf (Martínez-Iglesias y Gómez, 1986; Martínez-Iglesias y Alcolado, 1990; Martínez-Iglesias and García-Raso, 1999); Cojímar, La Habana (Ortiz, 2001); central area of the Ana María Gulf (Rodríguez-Viera *et al.*, 2012); Boca de Canasí, Mayabeque (Barro *et al.*, 2013); Gran Banco de Buena Esperanza, Guacanayabo Gulf (Hernández-Fernández *et al.*, 2013).

New records. Pinar del Río: María la Gorda; Holguín: Gibara Bay and Guardalavaca beach; Guantánamo: Ecological Reserve Maisí-Caleta.

Family Majidae Samouelle, 1819

Subfamily Majinae Samouelle, 1819

Genus *Amphithrax* Windsor & Felder, 2017

Amphithrax aculeatus (Herbst, 1790)

Known distribution in Cuba. Punta del Este, Isla de la Juventud (Valdés-Muñoz, 1986); Juan García and Cantiles Cays, Batabanó Gulf (Martínez-Iglesias and García-Raso, 1999) (as *Mithrax pilosus* Rathbun, 1892); Santiago de Cuba (Diez and Jover, 2015).

New records. Pinar del Río: María la Gorda; Holguín: Naranjo Bay; Guantánamo: Ecological Reserve Maisí-Caleta.

Genus *Damithrax* Windsor y Felder, 2014

Damithrax pleuracanthus (Stimpson, 1871)

Known distribution in Cuba. Punta del Este, Isla de la Juventud (Valdés-Muñoz, 1986); Batabanó Gulf and northcentral coast (Martínez-Iglesias y Alcolado, 1990; Martínez-Iglesias, 2007).

New records. Pinar del Río: María la Gorda.

Genus *Maguimithrax* Klompmaker, Portell, Klier, Prueter & Tucker, 2015

Maguimithrax spinosissimus (Lamarck, 1818)

Known distribution in Cuba. Cojímar, La Habana (Ortiz, 2001); Punta del Este, Isla de la Juventud (Valdés-Muñoz, 1986); Restinga Prieta, Ensenada de la Siguanea, Isla de la Juventud (Martínez-Iglesias y Gómez, 1986); Batabanó Gulf (Martínez-Iglesias y Alcolado, 1990); central area of the Ana María Gulf (Rodríguez-Viera *et al.*, 2012); Gran Banco de Buena Esperanza, Guacanayabo Gulf (Hernández-Fernández *et al.*, 2013); Santiago de Cuba (Diez and Jover, 2015).

New records. Pinar del Río: María la Gorda; Holguín: Guardalavaca beach; Guantánamo: Ecological Reserve Maisí-Caleta.

Genus *Macrocoeloma* Miers, 1879

Macrocoeloma subparallelum (Stimpson, 1860)

Known distribution in Cuba. Northeastern of Batabanó Gulf (Martínez-Iglesias y Gómez, 1986; Martínez-Iglesias y Alcolado, 1990); Santiago de Cuba (Diez and Jover, 2015).

New records. Pinar del Río: María la Gorda; Holguín: Naranjo Bay; Guantánamo: Taco Bay, Baracoa.

Macrocoeloma trispinosum (Latreille, 1825)

Known distribution in Cuba. Cantiles Cay, Batabanó Gulf (Martínez-Iglesias and García-Raso, 1999); Santiago de Cuba (Diez and Jover, 2015).

New records. Pinar del Río: María la Gorda; Holguín: Naranjo Bay.

Genus *Mithraculus* White, 1847

Mithraculus cinctimanus Stimpson, 1860

Known distribution in Cuba. Punta del Este, Isla de la Juventud (Valdés-Muñoz, 1986); Juan González and Diego Pérez Cays, Batabanó Gulf (Martínez-Iglesias and García-Raso, 1999); Cojímar, La Habana (Ortiz, 2001); La Bajada, Península de Guanahacabibes, Pinar del Río (Varela *et al.*, 2003); Santiago de Cuba (Diez and Jover, 2015).

New records: Guantánamo. Ecological Reserve Maisí-Caleta.

Mithraculus coryphe (Herbst, 1801)

Known distribution in Cuba. Punta del Este, Isla de la Juventud (Valdés-Muñoz, 1986); Cantiles Cay, Batabanó Gulf (Martínez-Iglesias and García-Raso, 1999); La Bajada, Península de Guanahacabibes, Pinar del Río (Varela *et al.*, 2003); Santiago de Cuba (Diez and Jover, 2015).

New records. Las Tunas: La Herradura beach; Holguín: Naranjo Bay and Guardalavaca beach; Guantánamo: Ecological Reserve Maisí-Caleta.

Mithraculus forceps (A. Milne-Edwards, 1875)

Known distribution in Cuba. Juan González, Diego Pérez, and Cantiles Cays, Batabanó Gulf (Martínez-Iglesias and García-Raso, 1999); María la Gorda, Península de Guanahacabibes, Pinar del Río (Lalana *et al.*, 2007).

New records. Las Tunas: La Herradura beach; Holguín: Naranjo Bay; Guantánamo: Taco Bay, Baracoa, and Ecological Reserve Maisí-Caleta.

Genus *Omalacantha* Streets, 1871*Omalacantha bicornuta* (Latreille, 1825)

Known distribution in Cuba. Punta del Este, Isla de la Juventud (Valdés-Muñoz, 1986); Juan González, Diego Pérez, and Cantiles Cays, Batabanó Gulf (Martínez-Iglesias and García-Raso, 1999); Cojímar, La Habana (Ortiz, 2001); El Resguardo, Península de Guanahacabibes, Pinar del Río (Varela *et al.*, 2003); María la Gorda, Península de Guanahacabibes (Lalana *et al.*, 2007); Santiago de Cuba (Diez and Jover, 2015).

New records. Las Tunas: La Herradura beach; Holguín: Gibara and Naranjo Bays; Guantánamo: Taco Bay, Baracoa, and Ecological Reserve Maisí-Caleta.

Genus *Stenocionops* Desmarest, 1823*Stenocionops furcatus* (Olivier, 1791) (Fig. 2F)

Known distribution in Cuba. Northcentral coast (Martínez-Iglesias, 2007).

New records. Camagüey: Nuevitas Bay.

Genus *Teleophrys* Windsor & Felder, 2014*Teleophrys ruber* (Stimpson, 1871)

Known distribution in Cuba. Juan González Cay, Batabanó Gulf (Martínez-Iglesias and García-Raso, 1999); María la Gorda, Península de Guanahacabibes, Pinar del Río (Lalana *et al.*, 2007).

New records. Pinar del Río: María la Gorda.

Genus *Thersandrus* Rathbun, 1879*Thersandrus compressus* (Desbonne, 1867)

Known distribution in Cuba. Diego Pérez and Juan González Cays, Batabanó Gulf (Martínez-Iglesias and García-Raso, 1999).

New records. María la Gorda, Península de Guanahacabibes.

Genus *Thoe* Bell, 1835*Thoe puella* (Stimpson, 1860)

Known distribution in Cuba. Diego Pérez, and Cantiles Cays, Batabanó Gulf (Martínez-Iglesias and García-Raso, 1999); María la Gorda, Península de Guanahacabibes, Pinar del Río (Lalana *et al.*, 2007); Santiago de Cuba (Diez and Jover, 2015).

New records. Guantánamo: Taco Bay.

Superfamily Parthenopoidea MacLeay, 1838

Family Parthenopidae MacLeay, 1838

Subfamily Parthenopinae MacLeay, 1838

Genus *Platylambrus* Stimpson, 1871*Platylambrus serratus* (H. Milne-Edwards, 1834) (Fig. 3A and 3B)

Known distribution in Cuba. Punta del Este, Isla de la Juventud (Valdés-Muñoz, 1986); Diego Pérez Cay, Batabanó Gulf (Martínez-Iglesias y Gómez, 1986; Martínez-Iglesias y Alcolado, 1990; Martínez-Iglesias and García-Raso, 1999).

New records. Holguín: Nipe Bay.

Superfamily Portunoidea Rafinesque, 1815

Family Portunidae Rafinesque, 1815

Subfamily Portuninae Rafinesque, 1815

Genus *Achelous* De Hann, 1833

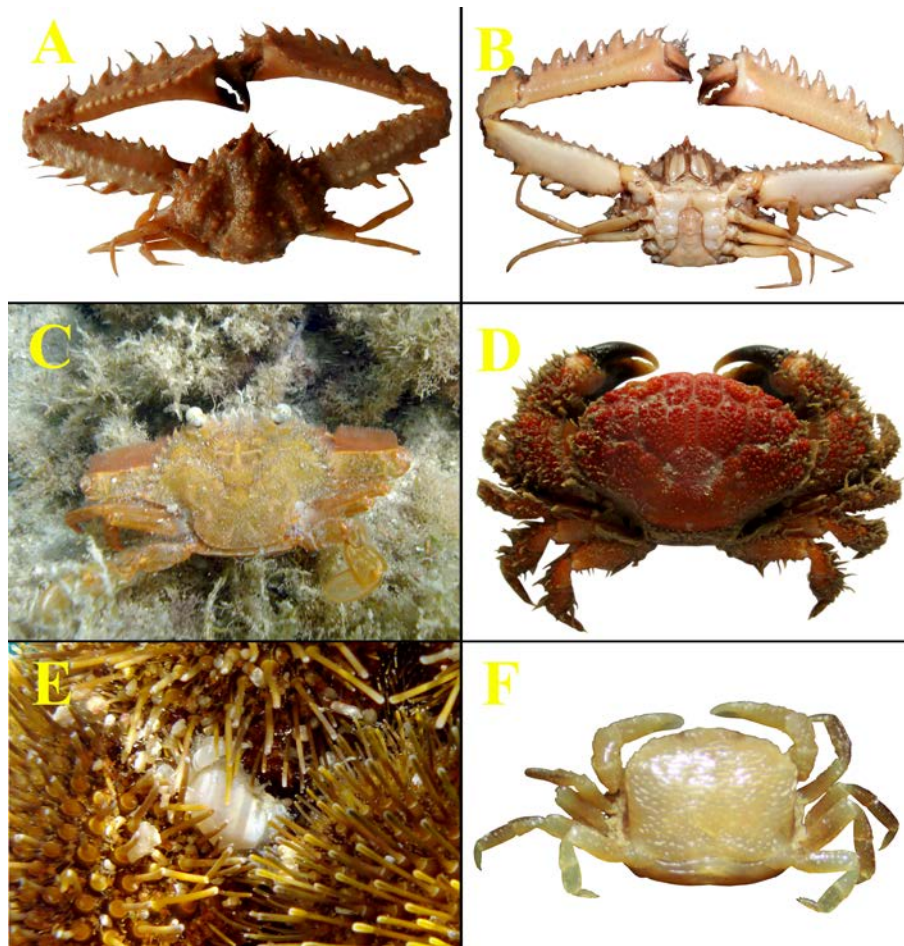


Fig. 3. Braquiuran crabs. A-B: *Platylambrus serratus* from Nipe Bay, C: *Achelous ordwayi* from Taco Bay, D: *Actaea bifrons* from El Guaimaral, E: *Clypeasterophilus rugatus* from Guardalavaca, and F: *Dissodactylus primitivus* from Guanahacabibes.

Achelous depressifrons (Stimpson, 1859)

Known distribution in Cuba. Punta del Este, Isla de la Juventud (Valdés-Muñoz, 1986); Diego Pérez, and Cantiles Cays, Batabanó Gulf, northeastern of Isla de la Juventud, northern of San Felipe Cay (Martínez-Iglesias y Gómez, 1986; Martínez-Iglesias and García-Raso, 1999); Damas Cay, Santiago de Cuba (Diez and Jover, 2015).

New records. Santiago de Cuba: El Guaimaral.

Achelous ordwayi (Stimpson, 1860) (Fig. 3C)

Known distribution in Cuba. Punta del Este, Isla de la Juventud (Valdés-Muñoz, 1986); Restinga Prieta, Diego Pérez, and Cantiles Cays, northern of San Felipe Cay, Batabanó Gulf (Martínez-Iglesias y Gómez, 1986; Martínez-Iglesias and García-Raso, 1999); Cojímar, La Habana (Ortiz, 2001).

New records. Guantánamo: Taco Bay, Baracoa.

Achelous sebae (H. Milne-Edwards, 1834)

Known distribution in Cuba. Flamenco, Batabanó Gulf (Martínez-Iglesias y Gómez, 1986); Cojímar, La Habana (Ortiz, 2001).

New records. Santiago de Cuba: Las Sardinias.

Genus *Callinectes* Stimpson, 1860

Callinectes sapidus (Rathbun, 1896)

Known distribution in Cuba. Southern of Batabanó Gulf (Martínez-Iglesias y Gómez, 1986); Cojímar, La Habana (Ortiz, 2001); Boca de Canasí, Mayabeque (Barro *et al.*, 2013); several localities in Santiago de Cuba (see Gómez *et al.*, 2009; Diez and Jover, 2015).

New records. Pinar del Río: María la Gorda; Las Tunas: Puerto Padre Bay and La Herradura beach; Holguín: Gibara, Naranjo, Banes, Nipe and Levisa Bays, Guardalavaca Beach; Guantánamo: Taco Bay, Baracoa.

Superfamily Xanthoidea MacLeay, 1838

Family Panopeidae Ortmann, 1893

Subfamily Panopeinae Ortmann, 1893

Genus *Eurypanopeus* A. Milne-Edwards, 1880

Eurypanopeus abbreviatus (Stimpson, 1860)

Known distribution in Cuba. Santiago de Cuba (Diez and Jover, 2015).

New records. Las Tunas: La Herradura beach; Holguín: Gibara and Nipe Bays; Guantánamo: Taco Bay.

Genus *Panopeus* H. Milne-Edwards, 1834

Panopeus harttii (Smith, 1869)

Known distribution in Cuba. Juan González, Diego Pérez, and Cantiles Cays, Batabanó Gulf (Martínez-Iglesias and García-Raso, 1999); Santiago de Cuba (Diez and Jover, 2015).

New records. Holguín: Gibara Bay; Guantánamo: Taco Bay.

Panopeus herbstii (H. Milne-Edwards, 1834)

Known distribution in Cuba. Punta del Este, Isla de la Juventud (Valdés-Muñoz, 1986); Around Cazonas Bay, Batabanó Gulf (Martínez-Iglesias y Gómez, 1986); Cojímar, La Habana (Ortiz, 2001); Boca de Canasí, Mayabeque (Barro *et al.*, 2013); Santiago de Cuba (Diez and Jover, 2015).

New records. Holguín: Gibara Bay; Guantánamo: Taco Bay.

Panopeus occidentalis Saussure, 1857

Known distribution in Cuba. Punta del Este, Isla de la Juventud (Valdés-Muñoz, 1986); Diego Pérez, and Cantiles Cays, Ensenada de la Broa, Isla de la Juventud, Batabanó Gulf (Martínez-Iglesias y Gómez, 1986; Martínez-Iglesias and García-Raso, 1999); Santiago de Cuba (Diez and Jover, 2015).

New records. Holguín: Gibara Bay.

Panopeus rugosus (A. Milne-Edwards, 1880)

Known distribution in Cuba. Northcentral coast (Martínez-Iglesias, 2007).

New records. Santiago de Cuba: La Mula.

Family Xanthidae MacLeay, 1838

Subfamily Acteinae Alcock, 1898

Genus *Actaea* De Haan, 1833

Actaea bifrons (Rathbun, 1898) (Fig. 3D)

Known distribution in Cuba. Juan González Cay, Batabanó Gulf (Martínez-Iglesias and García-Raso, 1999); Boca de Canasí, Mayabeque (Barro *et al.*, 2013).

New records. Santiago de Cuba: El Guaimaral.

Subfamily Xanthinae MacLeay, 1838

Genus *Cataleptodius* Guinot, 1968

Cataleptodius floridanus (Gibbes, 1850)

Known distribution in Cuba. Cantiles Cay, Batabanó Gulf (Martínez-Iglesias and García-Raso, 1999); Santiago de Cuba (Diez and Jover, 2015).

New records. Las Tunas: La Herradura beach; Holguín: Gibara, Nipe and Naranjo Bays; Guantánamo: Taco Bay.

Subsection Thoracotremata Guinot, 1977

Superfamily Grapsoidea MacLeay, 1838

Family Gecarcinidae MacLeay, 1838

Genus *Cardisoma* Latreille, 1828

Cardisoma guanhumí (Latreille, 1828)

Known distribution in Cuba. Cayo Jutía, Ensenada de Santa Rosa, Santa Lucía, and Ensenada de Cajón (Pinar del Río), Mariel (Artemisa), Cabañas Bay (La Habana) (Rathbun, 1918); Cojímar, La Habana (Ortiz, 2001); María la Gorda, Península de Guanahacabibes, Pinar del Río (Lalana *et al.*, 2007); Boca de Canasí, Mayabeque (Barro *et al.*, 2013); Santiago de Cuba (Diez and Jover, 2015).

New records. Las Tunas: La Herradura beach; Holguín: Gibara, Nipe and Naranjo Bays; Guantánamo: Taco Bay.

Genus *Gecarcinus* Leach, 1814

Gecarcinus lateralis (Fremenville, 1835)

Known distribution in Cuba. Ensenada de Cajón, off Cape San Antonio (Pinar del Río), Mariel (Artemisa) (Rathbun, 1918); María la Gorda, Península de Guanahacabibes, Pinar del Río (Lalana *et al.*, 2007); Boca de Canasí, Mayabeque (Barro *et al.*, 2013).

New records. Holguín: Punta de Mulas beach; Guantánamo: Ecological Reserve Maisí-Caleta.

Gecarcinus ruricola (Linnaeus, 1758)

Known distribution in Cuba. Ensenada de Cajón, off Cape San Antonio (Pinar del Río) (Rathbun, 1918); Roncali lighthouse, Península de Guanahacabibes, Pinar del Río (Varela *et al.*, 2003); María la Gorda, Península de Guanahacabibes (Lalana *et al.*, 2007); Boca de Canasí, Mayabeque (Barro *et al.*, 2013); Santiago de Cuba (Diez and Jover, 2015).

New records. Las Tunas: La Herradura beach; Holguín: Gibara, Naranjo, Nipe Bays, Punta de Mulas and Morales beaches; Guantánamo: Ecological Reserve Maisí-Caleta.

Family Grapsidae MacLeay, 1838

Subfamily Grapsinae MacLeay, 1838

Genus *Geograpsus* Stimpson, 1858

Geograpsus lividus (H. Milne-Edwards, 1837)

Known distribution in Cuba. Mariel, Artemisa, and Ensenada de Cajón, off Cape San Antonio, Pinar del Río (Rathbun, 1918); Santiago de Cuba (Diez and Jover, 2015).

New records. Holguín: Gibara and Naranjo Bays; Guantánamo: Taco Bay

Genus *Goniopsis* De Haan, 1833

Goniopsis cruentata (Latreille, 1803)

Known distribution in Cuba. Mariel, Artemisa, and Ensenada de Cajón, off Cape San Antonio, Pinar del Río (Rathbun, 1918); Cojímar, La Habana (Ortiz, 2001); Boca de Canasí, Mayabeque (Barro *et al.*, 2013); Punta del Este, Isla de la Juventud (Valdés-Muñoz, 1986); Santiago de Cuba (Diez and Jover, 2015).

New records. Holguín: Guardalavaca beach; Guantánamo: Taco Bay.

Genus *Grapsus* Lamarck, 1801

Grapsus grapsus (Linnaeus, 1758)

Known distribution in Cuba. Cabañas Bay, La Habana, and Ensenada de Cajón, off Cape San Antonio, Pinar del Río (Rathbun, 1918); Playa Antonio, Península de Guanahacabibes (Varela *et al.*, 2003); Cojímar, La Habana (Ortiz, 2001); Boca de Canasí, Mayabeque (Barro *et al.*, 2013); Santiago de Cuba (Diez and Jover, 2015).

New records. Pinar del Río: María la Gorda; Holguín: Gibara and Naranjo Bays, Guardalavaca beach; Guantánamo: Taco Bay.

Genus *Pachygrapsus* Randall, 1839

Pachygrapsus gracilis (Saussure, 1858)

Known distribution in Cuba. Mariel, Artemisa (Rathbun, 1918); Boca de Canasí, Mayabeque (Barro *et al.*, 2013); Santiago de Cuba (Diez and Jover, 2015).

New records. Holguín: Gibara Bay; Guantánamo: Taco Bay, Baracoa.

Pachygrapsus transversus (Gibbes, 1850)

Known distribution in Cuba. Mariel (Artemisa), Vedado and Cabañas Bay (La Habana), Ensenada de Cajón, off Cape San Antonio, Esperanza and Los Arroyos (Pinar del Río) (Rathbun, 1918); Juan González and Diego Pérez Cays, Batabanó Gulf (Martínez-Iglesias and García-Raso, 1999); Boca de Canasí, Mayabeque (Barro *et al.*, 2013); Santiago de Cuba (Diez and Jover, 2015).

New records. Las Tunas: La Herradura beach; Holguín: Gibara Bay; Guantánamo: Taco Bay, Baracoa.

Genus *Plagusia* Latreille, 1804

Plagusia depressa (J.C. Fabricius, 1775)

Known distribution in Cuba. Cojímar, La Habana (Ortiz, 2001); Boca de Canasí, Mayabeque (Barro *et al.*, 2013); Santiago de Cuba (Diez and Jover, 2015).

New records. Guantánamo: Taco Bay.

Subfamily Percninae Števíć, 2005

Genus *Percnon* Gistel, 1848

Percnon gibbesi (H. Milne-Edwards, 1853)

Known distribution in Cuba. Ensenada de Cajón, off Cape San Antonio (Pinar del Río) and Cabañas Bay (La Habana) (Rathbun, 1918); Cojímar, La Habana (Ortiz, 2001); María la Gorda, Península de Guanahacabibes, Pinar del Río (Lalana *et al.*, 2007); Boca

de Canasí, Mayabeque (Barro *et al.*, 2013); Punta del Este, Isla de la Juventud (Valdés-Muñoz, 1986); Santiago de Cuba (Diez and Jover, 2015).

New records. Las Tunas: La Herradura beach; Holguín: Gibara and Naranjo Bays; Guantánamo: Taco Bay, Baracoa, and Ecological Reserve Maisí-Caleta.

Family Sesarmidae Dana, 1851

Genus *Aratus* H. Milne Edwards, 1853

Aratus pisonii (H. Milne Edwards, 1837)

Known distribution in Cuba. Los Arrollas and Coloma (Pinar del Río), Mariel (Artemisa), and Cabañas Bay (La Habana) (Rathbun, 1918); Cojímar, La Habana (Ortiz, 2001); Boca de Canasí, Mayabeque (Barro *et al.*, 2013); Punta del Este, Isla de la Juventud (Valdés-Muñoz, 1986); Santiago de Cuba (Diez and Jover, 2015).

New records. Camagüey: Júcaro.

Family Varunidae H. Milne-Edwards, 1853

Subfamily Cyclograpsinae H. Milne-Edwards, 1853

Genus *Cyclograpsus* H. Milne-Edwards, 1837

Cyclograpsus integer (H. Milne-Edwards, 1837)

Known distribution in Cuba. Boca de Canasí, Mayabeque (Barro *et al.*, 2013); Santiago de Cuba (Diez and Jover, 2015).

New records. Las Tunas: La Herradura beach; Holguín: Gibara, Naranjo and Nipe Bays; Guantánamo: Taco Bay, Baracoa.

Superfamily Ocypodoidea Rafinesque, 1815

Family Ocypodidae Rafinesque, 1815

Subfamily Ocypodinae Rafinesque, 1815

Genus *Ocypode* Weber, 1795

Ocypode quadrata (Fabricius, 1787)

Known distribution in Cuba. Mariel (Artemisa), Cabañas Bay (La Habana), Cayo Hutía and Ensenada de Santa Rosa, Pinar del Río (Rathbun, 1918); Cojímar, La Habana (Ortiz, 2001); several localities in the southern coast of Península de Guanahacabibes, Pinar del Río (Varela *et al.*, 2003); María la Gorda, Península de Guanahacabibes (Lalana *et al.*, 2007); several localities in the northeastern coast: Playa Blanca, Don Lino, Esmeralda, Guardalavaca, Jiguaní, and Mapurísí (Ocaña *et al.*, 2012); Santiago de Cuba (Diez and Jover, 2015).

New records. Las Tunas: La Herradura beach; Holguín: Gibara and Naranjo Bays.

Subfamily Ucinæ Dana, 1851

Genus *Uca* Leach, 1814

Subgenus *Minuca* Bott, 1973

Uca (M.) rapax (Smith, 1870)

Known distribution in Cuba. Playa de Baracoa, La Habana, and Varadero, Matanzas (Juarrero y Ortiz, 2003); Santiago de Cuba (Diez and Jover, 2015).

New records. Guantánamo: Taco Bay, Baracoa.

Family Ucididae Števcíć, 2005

Genus *Ucides* Rathbun, 1897

Ucides cordatus (Linnaeus, 1758)

Known distribution in Cuba. Cape Cajón (Pinar del Río), Playa (La Habana), Baracoa (Guantánamo), (Rathbun, 1918); Santiago de Cuba (Diez and Jover, 2015).

New records. Matanzas: Canímar; Holguín: Banes Bay.

Superfamily Pinnotheroidea De Haan, 1833

Family Pinnotheridae De Haan, 1833

Subfamily Pinnothereliinae Alcock, 1900

Genus *Clypeasterophilus* Campos & Griffith, 1990

Clypeasterophilus rugatus (Bouvier, 1917) (Fig. 3E)

Known distribution in Cuba. Cayo Laveros, Pinar del Río (Rathbun, 1918); Diego Pérez Cay, eastern of Isla de la Juventud (Martínez-Iglesias y Gómez, 1986; Martínez-Iglesias y Alcolado, 1990); Northcentral coast (Martínez-Iglesias, 2007).

New records. Holguín: Guardalavaca beach.

Genus *Dissodactylus* Smith, 1870

Dissodactylus primitivus (Bouvier, 1917) (Fig. 3F)

Known distribution in Cuba. Punta del Este, Isla de la Juventud (Valdés-Muñoz, 1986); Diego Pérez, and Cantiles Cays, Bahía de Cazonos, Batabanó Gulf (Martínez-Iglesias y Gómez, 1986; Martínez-Iglesias y Alcolado, 1990; Martínez-Iglesias and García-Raso, 1999).

New records. Pinar del Río: María la Gorda.

DISCUSSION

Only 25 species of Anomura of the 43 recorded in Cuba (except Galathoidea) have known distribution in the ecoregions of the Cuban platform (Martínez-Iglesias, 2007). The distribution of four of them (*Coenobita clypeatus*, *Clibanarius antillensis*, *C. scolopetarius*, and *Hippa testudinaria*) was recorded posteriorly (Ortiz *et al.*, 2013; Diez and Jover, 2015), and is extended in this work. *Pagurus maclaughlinae* had not known locality in Cuba, now is recorded from Las Sardinias. The distribution of the other recorded species of Anomura in this paper is extended, particularly to the understudy eastern region of Cuba. The present results demonstrate the necessity to extend the researches on this group in the island, where several new species have been described (*e. g.* Martínez-Iglesias y Gómez, 1989; Manjón-Cabeza *et al.*, 2002). A deep study of the group in the Island can

be conduct to the description of other species and update the distribution of several others.

On the Cuban Brachyura, 124 species have known distribution (Martínez-Iglesias, 2007). In the present work, we report for first time the local distribution of two species on the Cuban platform (*Dromia erythropus* and *Menippe nodifrons*). These two species were recorded from Cuba (Gómez, 1980; Martínez-Iglesias, 2007; Diez, 2014) but specific localities were uncertain. Other species distribution were recorded by Ocaña *et al.* (2012), and Diez and Jover (2015). Also, it is necessary to add four species to the checklist of braquiuran crabs from Santiago the Cuba, omitted by Diez and Jover (2015), but recorded before in the papers of Marie Rathbun regarding the Amerian crabs. These species are *Solenolambrus typicus* (Stimpson 1871) (Rathbun, 1925), *Micropanope urinator*

(H. Milne-Edwards 1881) (Rathbun, 1930), and *Cymonomus quadratus* A. Milne-Edwards, 1880 and *Ethusa microphthalma* Smith, 1881 (Rathbun, 1937). Adding these four records, in Santiago de Cuba occur 74 species of braquiurans, representing the 24% of the marine species of Cuba. In general, the distribution data of the Cuban decapods is insufficient, making impossible to compare the different regions of the platform and carry out biogeographic studies.

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