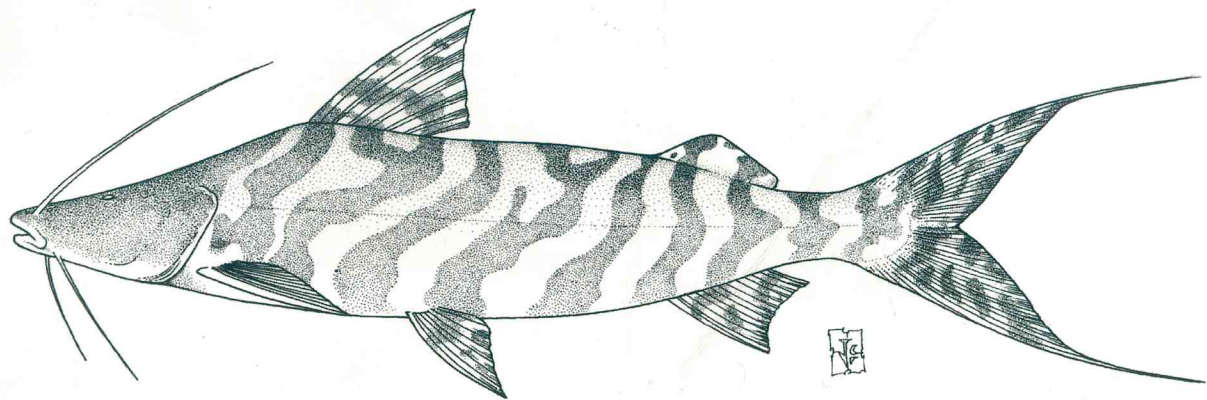


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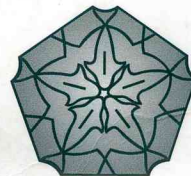
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Policládidos (Platyhelminthes: “Turbellaria”) del Atlántico Tropical Occidental

Sigmer Y. Quiroga¹, Marcela Bolaños² y Marian K. Litvaitis³

1 Research assistant, Department of Zoology, Rudman Hall, University of New Hampshire, Durham, NH 03824, USA. squiroga@cisunix.unh.edu

2 Research assistant, Department of Zoology, Rudman Hall, University of New Hampshire, Durham, NH 03824, USA. dbolanos@cisunix.unh.edu

3 Associate professor, Department of Zoology, Rudman Hall, University of New Hampshire, Durham, NH 03824, USA. m.litvaitis@unh.edu

Palabras Clave: Platyhelminthes, Turbellaria, Polycladida, Gusanos planos, Atlántico Tropical Occidental

El phylum Platyhelminthes es considerado una ramificación ancestral dentro de los phyla bilaterales (Hyman 1951). A éste pertenecen gusanos acelomados y dorsoventralmente aplanados que carecen de sistemas circulatorio y respiratorio (Hyman 1951). Aunque Ehlers (1986) define las siguientes apomorfias para el taxón: a) ausencia de mitosis en células somáticas, por ejemplo: las células somáticas se diferencian a partir de blastómeros o células totipotenciales en estado post-embriónico; y b) células multiciliadas, donde los cilios carecen de centriolo accesorio, la monofilia del grupo no ha podido ser establecida con seguridad hasta el momento. Tradicionalmente, los platelmintos han sido divididos en gusanos de vida libre Turbellaria y los grupos parásitos Trematoda, Monogenea y Cestoda. Pero hasta la fecha ninguna apomorfia ha sido encontrada para definir los Turbellaria; se ha demostrado que caracteres como vida libre y cuerpo cubierto por epidermis multiciliada no representan características para el taxón. El término Turbellaria actualmente es usado en una manera descriptiva. Dentro de los turbelarios dos grupos pueden ser reconocidos: microturbelarios y macroturbelarios, sin embargo estas designaciones no tienen valor sistemático y sólo son usados para describir la talla.

A través de análisis cladísticos, Ehlers (1986) divide el phylum en Catenulida y Euplatyhelminthes, el último contiene los grupos: Acelomorpha y Rhabditophora. Los Acoelomorpha están compuestos por los ordenes Acoela y Nemertodermatida, mientras que los Rhabditophora comprende todos los otros órdenes de platelmintos, incluyendo todas las formas parasíticas, aunque es difícil establecer las relaciones filogenéticas entre estos grupos debido a la ausencia de sinapomorfias convincentes (Klauser *et al.*, 1986, Smith & Tyler 1986, Smith *et al.*, 1986).

El orden Polycladida (formalmente considerado dentro de los “Turbellaria”) es ahora incluido dentro de los Rhabditophora y basado en la talla de las especies dentro de los macroturbelarios. Una agrupación adicional incluye a los policládidos junto con los catenúlidos, acoelomorfos, macrostómidos y haplofaríngidos dentro de los Archoophora (Karling 1974). Esta agrupación se basa en un grado organizacional derivado del arreglo homocelular de las gónadas femeninas y la producción de huevos entolecíticos (Hyman 1951). El grupo opuesto en este grado de organización corresponde a los Neoophora, los cuales son caracterizados por la presencia de gónadas heterocelulares y huevos ectolecíticos e incluye al resto de grupos de platelmintos.

Los Policládidos son casi exclusivamente marinos, sólo una especie del género *Limnostylochus* vive en agua dulce (Hyman 1951). Son comúnmente habitantes de arrecifes de coral, y aunque no son parásitos, algunos de ellos viven en asociación con otros invertebrados, especialmente moluscos, crustáceos y equinodermos. Otros pueden ser encontrados habitando dentro de la zona intermareal dentro de conchas de moluscos, en cavidades de camas de espojas, balanos o bivalvos (Prudhoe 1985). La principal característica del grupo es su intestino altamente ramificado (Cannon 1986), a partir del cual se deriva su nombre (poly = muchos; clade = ramas). La presencia de una faringe plegada “plicatus” y la reabsorción de blastómeros son autopomorfias adicionales del taxón (Ehlers 1986). Los policládidos tienen pocas características externas; sin embargo, la presencia o ausencia de agrupaciones de ocelos y verdaderos tentáculos o pseudotentáculos, los cuales son formados por pliegues del margen anterior del cuerpo, pue-

den ser usados como características sistemáticas (Newman & Cannon 1994). A pesar de esto la división inicial del orden está basada en la presencia o ausencia de un órgano suctor en la superficie ventral de los gusanos la cual divide a los policládidos en dos subordenes: Acotylea (sin órgano suctor) y Cotylea (con órgano suctor) (Lang 1884).

Los policládidos, como todos los platelmintos, son hermafroditas pero son incapaces de autofertilizarse. Su desarrollo puede ser directo o indirecto a partir de huevos entolecíticos. El desarrollo indirecto involucra una larva de Müller o una larva de Götte (Hyman 1951). El sistema reproductivo de los policládidos es complejo y es una de las principales características usadas para su identificación.

Los policládidos son de gran interés en el campo de la toxicología y regeneración. Algunos estudios han mostrado la presencia de varios compuestos tóxicos en el tejido de algunas especies (Schupp *et al.*, 1999; Miyazawa *et al.*, 1987). En términos ecológicos, se ha demostrado que los acotylea son activos predadores de especies de importancia comercial, por ejemplo algunas especies de *Stylochus* pueden devorar huevos y causar daños a las ostras (Pearse & Wharton 1938, Galleni *et al.*, 1980, Newman & Cannon 1993), y pueden llegar a convertirse en plagas de bivalvos comerciales incluyendo ostras perlíferas y almejas gigantes (Newman & Cannon 1997a). Adicionalmente algunas especies de policládidos han mostrado ser bioindicadores de la salud de los arrecifes de coral.

La distribución de los policládidos está principalmente limitada por factores físicos y la mayor abundancia y diversidad de géneros y especies se presenta en las zonas tropica-

les, principalmente en los arrecifes de coral (Prudhoe 1985). El mismo autor afirma que más de 900 especies de policládidos han sido descritas formalmente, sin embargo recientes contribuciones realizadas por Newman & Cannon (1994, 1996a, 1996b, 1997a, 1997b, 1998, 2000, 2002) en el Indopacífico ha incrementado considerablemente este número. A pesar de las numerosas especies registradas, la diversidad de policládidos tropicales no es bien conocida debido a la dificultad en el momento de su recolección, manejo e identificación; por estas razones, los policládidos han generado muy poco interés por parte de los investigadores. Adicionalmente la mayoría de los estudios llevados a cabo hasta la fecha han basado sus descripciones en especímenes individuales, inmaduros, preservados o simplemente en ilustraciones. Los policládidos son raramente colectados intactos y como consecuencia, son preservados inadecuadamente en colecciones de museos. Además su hábitat y biología son pobremente conocidas (Newman & Cannon 1994).

En un esfuerzo por crear un nuevo y completo sistema de clasificación, Faubel (1983, 1984) y Prudhoe (1985) casi simultáneamente publican dos diferentes claves taxonómicas. La lista de chequeo presentada en este documento se basa en Faubel (1983, 1984), que establece un nuevo sistema basado en la orientación de la vesícula prostática con relación al ducto eyaculatorio y su estructura interna. En este sistema, las tres superfamilias de acotyleos (Ilyplanoidea, Stylochoidea y Leptoplanoidea) son mantenidas sin embargo, nuevas familias son establecidas para un total de 28 (Faubel 1983). Faubel 1984 divide al suborden Cotylea en cuatro superfamilias: Ditremaenidae, Euryleptoidea, Opisthogenioidea y Pseudocerotoidea y dentro de éstas sólo 15 familias son descritas.

Polyclads (Platyhelminthes: “Turbellaria”) from the Tropical Western Atlantic

Sigmer Y. Quiroga, Marcela Bolaños & Marian K. Litvaitis

Key Words: *Platyhelminthes, Turbellaria, Polycladida, Flatworms, Tropical Western Atlantic*

The phylum *Platyhelminthes* is considered to be an early branch among the bilateral phyla (Hyman 1951). It consists of acoelomate, dorsoventrally flattened worms lacking circulatory and respiratory systems (Hyman 1951). Ehlers (1986) defined the following apomorphies for the taxon: a) absence of mitosis in somatic cells, i. e., somatic cells differentiate from blastomeres or stem cells in post-embryonic stages; and b) multiciliated cells, where cilia lack accessory centrioles. However, at present, monophyly of the group cannot be established reliably. Traditionally, the *Platyhelminthes* had been divided into

the free-living *Turbellaria*, and the parasitic *Trematoda*, *Monogenea*, and *Cestoda*. But to date, no autapomorphies have been found to define the *Turbellaria*. Characters such as “free living” and “body covered by a multiciliated epidermis” have been shown not to represent defining characteristics for the taxon. Thus, the term “*Turbellaria*” currently is used in a descriptive way. Within the *turbellarians*, two groups can be recognized, namely *micro-* and *macroturbellarians*. These designations however, have no systematic value either, they are only used for size descriptions.

In a cladistic analysis, Ehlers (1986) divided the phylum into the Catenulida and the Euplatyhelminthes, the latter containing the Acoelomorpha and Rhabditophora. The Acoelomorpha consist of the orders Acoela and Nematodermatida, whereas the Rhabditophora comprise all other platyhelminth orders, including all parasitic forms (Appendix 1). Determining relationships among these lineages is difficult due to a lack of convincing synapomorphies (Klauser *et al.*, 1986, Smith & Tyler 1986, Smith *et al.*, 1986).

The order Polycladida (formerly considered in the "Turbellaria") consists of macroturbellarians and is now included among the Rhabditophora, based on the size of the species. An additional grouping includes the polyclads in the Archoophora together with the Catenulida, Acoelomorpha, Macrostromida, and Haplopharyngida (Karling 1974). This grouping is based on an organizational grade derived from the homocellular arrangement of female gonads and the production of entolecithal eggs (Hyman 1951). This organizational grade contrasts with the Neophora, which are characterized by heterocellular gonads and ectolecithal eggs and include all remaining platyhelminths.

Polyclads are almost exclusively marine; only one species of the genus *Limnostylochus* lives in freshwater (Hyman 1951). They commonly dwell on coral and rocky reefs and although they are not parasitic, some of them live in association with other invertebrates, especially mollusks, crustaceans and echinoderms. Others can be found living in the intertidal zone, in empty mollusk shells, in cavities of sponge beds, barnacles and bivalves (Prudhoe 1985). The group's main characteristic is the highly branched intestine (Cannon 1986), from which they derive their name (poly = many; clade = branches). The presence of a highly ruffled pharynx *plicatus* (some *Cotylea* have cylindrical pharynges *plicati*) and the reabsorption of blastomeres are additional autapomorphies of the taxon (Ehlers 1986). Polyclads have few external traits. However, the presence or absence of clusters of eyespots and either true tentacles or pseudotentacles, which are formed by folds of the anterior body margin, can be used as systematic characters (Newman & Cannon 1994). The initial division of the order though, is based on the presence or absence of a ventral sucker. This character divides the polyclads into the two suborders *Acotylea* (without sucker) and *Cotylea* (with sucker) (Lang 1884).

Polyclads like all platyhelminths, are hermaphrodites but do not self-fertilize. Their development can be direct or indirect from entolecithal eggs. Indirect development

involves either a Götte's larva or Müller's larva (Hyman 1951). The polyclad reproductive system is complex and of major importance with regard to their identification.

The polyclads are of interest to scientist in the fields of toxicology and regeneration. Studies have shown the presence of several toxic chemicals in their tissues (Schupp *et al.*, 1999; Miyazawa *et al.*, 1987). In ecological terms, many acotyleans have been shown to be active predators on commercial aquaculture species. For example, some species of *Stylochus* can devour eggs and spat of oysters (Pearse & Wharton 1938, Galleni *et al.*, 1980, Newman & Cannon 1993). They have also been shown to be pests of commercial bivalves including rock oysters, pearl oysters and giant clams (Newman & Cannon 1997). In addition some species of polyclads have been shown to be good indicators of the health of coral reefs.

The distribution of the polyclads is mainly limited by physical factors and the greatest number and diversity of genera and species occur in tropical zones, mostly in coral reefs (Prudhoe 1985). The previous author affirms that over 900 species of polyclads have been described formally, however recent contributions by Newman & Cannon (1994, 1996a, 1996b, 1997a, 1997b, 1998, 2000, 2002) in the Indo-Pacific region have increased this number considerably. Despite numerous species recorded, the diversity of tropical polyclads is not well known because of difficulties in collecting, handling and identification. For these reasons, polyclads have generated only little interest among researchers. In addition most of the studies carried out to date have based their descriptions on single, immature, preserved specimens or just on illustrations. Polyclads are rarely collected intact and, as a consequence, they are inadequately represented in museums collections. Moreover, the habitats and biology of polyclads are poorly known (Newman & Cannon 1994).

In an effort to create a new and complete classification system, Faubel (1983, 1984) and Prudhoe (1985) almost simultaneously published two different taxonomic accounts. The checklist presented here is based on Faubel (1983, 1984) who established a new system based on the orientation and relationship of the prostatic vesicle to the ejaculatory duct and its interior structure. In his system, the three superfamilies of acotyleans (*Ilyplanoidea*, *Stylochoidea* and *Leptoplanoidea*) are maintained, however new families have been established for a total of 28 families (Faubel 1983). Faubel (1984) divided the suborder *Cotylea* into four superfamilies: *Ditremagenioidea*, *Euryleptoidea*, *Opisthogenioidea* and *Pseudocerotoidea*; only 15 families are described.

Listado Taxonómico / *Taxonomic List*

La lista de chequeo presentada en este documento es la primera realizada para el Atlántico Tropical Occidental y se realizó a través de la recopilación bibliográfica de los más importantes estudios llevados a cabo en esta región. La información fue ajustada al sistema de clasificación propuesto por Faubel (1983, 1984) con algunas modificaciones de un reciente género propuesto por Newman y Cannon (1996b). Se presenta un total de 124 especies pertenecientes a 19 familias diferentes. Adicionalmente es importante mencionar que las especies registradas en este listado, pueden extender su distribución a otros océanos

This is the first checklist for the Tropical Western Atlantic, it was compiled from the most important published studies carried out in this region. The information was adapted to the classification system proposed by Faubel (1983, 1984) with some modifications of a recent genus proposed by Newman & Cannon (1996b). A total of 124 species is presented belonging to 19 different families. It is important to mention that the species registered in this list can be present in other oceans.

Abreviaturas / *Abbreviations*

USNM National Museum of Natural History; INV-PAL Colección de referencia INVEMAR (Instituto de Investigaciones Marinas y Costeras); BOC Bingham Oceanographic Collection, Yale University; PM Peabody Museum, Yale University; ZMUH Zoological Museum University of Hamburg.

ar: Aruba (Antillas menores / *lesser Antilles*); **at:** Antigua (Antillas menores / *lesser Antilles*); **bb:** Barbuda (Antillas menores / *lesser Antilles*); **be:** Bermudas (USA); **bd:** Barbados (Antillas menores / *lesser Antilles*); **bh:** Bahamas (Antillas mayores / *greater Antilles*); **bn:** Bonaire (Antillas menores / *lesser Antilles*); **nc:** North Carolina (USA); **cs:** Curaçao (Antillas menores / *lesser Antilles*); **dm:** Dominica (Antillas menores / *lesser Antilles*); **fl:** Florida (USA); **gm:** Golfo de México / *Gulf of Mexico*; **ia:** Islote Aves (Antillas menores / *lesser Antilles*); **ic:** Islas Caimán / *Cayman island* (greater antilles); **kb:** Klein Bonaire (Antillas menores / *lesser Antilles*); **ms:** Mar de los Sargazos / *Sargassum sea*; **op:** Isla de Providencia / *old providence island* (Colombia); **pr:** Puerto Rico (Antillas mayores / *greater Antilles*); **sc:** Columbia (USA); **sk:** St. Kitts (Antillas menores / *lesser Antilles*); **sm:** St. Martin (Antillas menores / *lesser Antilles*); **st:** St. Thomas (Antillas menores / *lesser Antilles*); **sv:** St. Vincent (Antillas menores / *lesser Antilles*); **sx:** St. Croix (Antillas menores / *lesser Antilles*); **tr:** trinidad (Antillas menores / *lesser Antilles*); **tx:** Texas (USA); **vi:** Islas Vírgenes / *Virgin Islands* (Antillas menores / *lesser Antilles*).

| Taxón / <i>Taxon</i> | Distribución en el Atlántico Tropical Occidental / <i>Distribution in the Tropical Western Atlantic</i> | Colección de referencia / <i>Reference Collection</i> | Literatura / <i>Literature</i> |
|--|---|---|--------------------------------|
| ACOTYLEA | | | |
| Ilyplanoidea | | | |
| Enantiidae | | | |
| <i>Spinantia pellucida</i> (Pearse, 1938) | eu (fl) | USNM 20193 | Pearse 1938, Hyman 1940 |
| Euplanidae | | | |
| <i>Euplana carolinensis</i> Hyman, 1940 | eu (dc nc) | USNM 20532 | Hyman 1940 |
| <i>Euplana gracilis</i> (Girard, 1850) | eu (fl) | USNM 20197 | Pearse 1938, Hyman 1940 |
| <i>Euplana hymanae</i> Marcus, 1947 | br | | Marcus 1947 |
| <i>Anandropilana portoricensis</i> Hyman, 1955 | eu (pr) | USNM 24619 | Hyman 1955b |
| <i>Crassandros dominicanus</i> Hyman, 1955 | an (bn cs) | USNM 24622 | Hyman 1955b |
| <i>Ilyella yrsa</i> (Marcus & Marcus, 1968) | an (dm) | | Marcus & Marcus 1968 |
| Discocelidae | | | |
| <i>Adenoplana evelinae</i> Marcus, 1950 | br | | Marcus 1950 |
| <i>Adenoplana obovata</i> (Schmarda, 1859) | co (tay) | INV-PLA 0001, INV-PLA 0002 HS | Quiroga <i>et al.</i> 2004 |
| <i>Coronadena mutabilis</i> (Verrill, 1873) | eu (fl) me | USNM 20186 | Pearse 1938, Hyman 1940 |
| Stylochoidea | | | |
| Stylochocestidae | | | |
| <i>Stylochocestus hewatti</i> (Hyman, 1955) | eu (pr) | USNM 24620, USNM 24621 | Hyman 1955b |
| <i>Pentaplana divae</i> Marcus, 1949 | br | | Marcus 1949 |
| <i>Chatziplana grubei</i> (Graff, 1892) | ic me | BOC 1047, BOC 1048 A-B | Hyman 1939c, Prudhoe 1944 |

| Taxón /Taxon | Distribución en el Atlántico Tropical Occidental / Distribution in the Tropical Western Atlantic | Colección de referencia /Reference Collection | Literatura /Literature |
|--|--|---|---|
| Plehnidae <i>Plehnia ellipsoides</i> (Girard, 1854) | eu (fl nc) | USNM | Hyman 1940, Hyman 1952 |
| Latocestidae <i>Latocestus callizona</i> (Marcus, 1947) <i>Latocestus whartoni</i> (Pearse, 1938) | br eu (fl nc) | USNM 20195 | Marcus 1947 Pearse 1938, Hyman 1940, Marcus & Marcus 1968 |
| <i>Nonatona euscopa</i> Marcus, 1952 <i>Eulatocestus caribbeanus</i> (Prudhoe, 1944) <i>Prolatocestus ocellatus</i> (Marcus, 1947) | br ic br | | Marcus 1952 Prudhoe 1944 Marcus 1947, Marcus 1949 |
| Stylochidae <i>Stylochus (Imogine) catus</i> Marcus & Marcus, 1968 <i>Stylochus (Stylochus) frontalis</i> Verrill, 1892 | br an (cs) eu (fl nc tx) | | Marcus & Marcus 1968 Pearse 1938, Hyman 1940, Marcus & Marcus 1968. |
| <i>Stylochus (Imogine) megalops</i> (Schmarda, 1859) <i>Stylochus (Imogine) oculiferus</i> Girard, 1853 | eu (pr) an (cs) eu (fl nc) | USNM 20187 | Hyman 1955b Pearse 1938, Hyman 1940, Hyman 1955b, Marcus & Marcus 1968 |
| <i>Stylochus (Imogine) pulcher</i> Hyman, 1940 <i>Stylochus (Imogine) ticus</i> Marcus, 1952 | eu (dc nc) br | USNM 20531 | Hyman 1940 Marcus 1952, Marcus & Marcus 1968 |
| <i>Stylochus (Imogine) zebra</i> (Verrill, 1882) <i>Stylochopsis ellipticus</i> (Girard, 1850) | eu (nc) eu (fl tx) | USMN 14398, USMN 20188 | Hyman 1940 Pearse 1938, Hyman 1940 |
| <i>Distylochus martae</i> (Marcus, 1947) | br | | Marcus 1947 |
| Leptoplanoidea Leptoplanidae <i>Hoploplana divae</i> Marcus, 1950 | br an (cs) | | Marcus 1950, Marcus & Marcus 1968 |
| <i>Hoploplana inquilina</i> (Wheeler, 1894) <i>Itannia ornata</i> Marcus, 1947 | an (sv) eu (fl) br | USNM 20189 | Pearse 1938 Marcus 1947, Marcus 1952 |
| Cestoplanidae <i>Cestoplana rubrocincta</i> Grube, 1840 <i>Cestoplana salar</i> Marcus, 1949 <i>Cestoplanella microps</i> (Verrill, 1901) | co (tay) br bd | INV-PLA 0003 BOC 1052, BOC 1053 A-E, PM A12376 | Quiroga et al. 2004 Marcus 1949 Verrill 1901, Hyman 1939c |
| Theamatidae <i>Theama evelinae</i> Marcus, 1949 | br | | Marcus 1949 |
| Stylochoplanidae <i>Stylochoplana alcha</i> (Marcus & Marcus, 1968) <i>Stylochoplana divae</i> (Marcus, 1949) <i>Stylochoplana selenopsis</i> Marcus, 1947 <i>Stylochoplana walsergia</i> Marcus & Marcus, 1968 <i>Alloioplana aulica</i> (Marcus, 1947) <i>Alloioplana wyona</i> (Marcus & Marcus, 1968) <i>Digynopora americana</i> Hyman, 1940 <i>Armatoplana divae</i> (Marcus, 1947) | an (sc) br br br br br eu (fl) br co (tay) | USNM 20533 INV-PLA 0004, INV-PLA 0005, INV-PLA 0006 HS | Marcus & Marcus 1968 Marcus 1947, Marcus 1949 Marcus 1947, Marcus 1949 Marcus & Marcus 1968 Marcus 1947 Marcus & Marcus 1968 Hyman 1940 Marcus 1947, Quiroga et al. 2004 |
| <i>Armatoplana lactoalba</i> (Verrill, 1900) | bh an (cs) eu (fl) | BOC 1045, BOC 1046 A-E, PM A12373, PM A12374 | Hyman 1939c, Marcus & Marcus 1968, Verrill 1900 |
| <i>Armatoplana leptalea</i> (Marcus, 1947) | an (at bb cs) eu (fl) | | Marcus 1947, Marcus & Marcus 1968 |
| <i>Armatoplana rabita</i> (Marcus & Marcus, 1968) <i>Armatoplana snadda</i> (Marcus & Marcus, 1968) | an (cs) an (bn cs) eu (sx fl) | | Marcus & Marcus 1968 Marcus & Marcus 1968 |

| Taxón /Taxon | Distribución en el Atlántico Tropical Occidental / Distribution in the Tropical Western Atlantic | Colección de referencia /Reference Collection | Literatura /Literature |
|---|---|--|--|
| <i>Comoplana angusta</i> (Verrill, 1983) | eu (fl) | | Hyman 1940, Hyman 1952, Marcus 1947 |
| <i>Heroplana bayeri</i> (Marcus & Marcus, 1968) | eu (fl) | | Marcus & Marcus 1968 |
| <i>Interplana evelinae</i> (Marcus, 1952) | br | | Marcus 1952 |
| <i>Phaenoplana longipenis</i> (Hyman, 1953) | co (tay) | INV-PLA 0007 HS | Quiroga <i>et al.</i> 2004 |
| <i>Phaenoplana peleca</i> (Marcus & Marcus, 1968) | an (cs) | | Marcus & Marcus 1968 |
| Cryptocelidae | | | |
| <i>Cryptocelis lilianae</i> Marcus & Marcus, 1968 | br | | Marcus & Marcus 1968 |
| <i>Phaenocelis medvedica</i> Marcus, 1952 | br co (tay) | INV-PLA 0008, INV-PLA 0009 HS | Marcus 1952, Quiroga <i>et al.</i> 2004 |
| <i>Phaenocelis purpurea</i> (Schmarda, 1859) | an (cs) eu (fl) ja | | Hyman 1955a, Marcus & Marcus 1968 |
| Notoplanidae | | | |
| <i>Notoplana annula</i> Marcus & Marcus, 1968 | an (cs) eu (fl) | | Marcus & Marcus 1968 |
| <i>Notoplana divae</i> Marcus, 1948 | br | | Marcus 1948 |
| <i>Notoplana insularis</i> Hyman, 1939 | an (tr) br co (sp) eu (fl pr) | USNM 20423 | Hyman 1939d, Hyman 1955b |
| <i>Notoplana micheli</i> Marcus, 1949 | br | | Marcus 1949 |
| <i>Notoplana plecta</i> Marcus, 1947 | br | | Marcus 1947 |
| <i>Notoplana queruca</i> Marcus & Marcus, 1968 | an (cs) eu (fl) co (tay) | INV-PLA 0010, INV-PLA 0011 HS | Marcus & Marcus 1968 |
| <i>Notoplana sawayai</i> Marcus, 1947 | br | | Marcus 1947 |
| <i>Notoplana tipuca</i> (Marcus & Marcus, 1968) | an (cs) | | Marcus & Marcus 1968 |
| <i>Triadomma curvum</i> Marcus, 1949 | br | | Marcus 1949 |
| <i>Triadomma evelinae</i> Marcus, 1947 | br | | Marcus 1947 |
| <i>Amyris hummelincki</i> Marcus & Marcus, 1968 | an (bn cs) | | Marcus & Marcus 1968 |
| <i>Amyris ujara</i> Marcus & Marcus, 1968 | an (bn) | | Marcus & Marcus 1968 |
| <i>Notocomplana evelinae</i> (Marcus, 1947) | br | | Marcus 1947, Marcus 1948 |
| <i>Notocomplana lapunda</i> (Marcus & Marcus, 1968) | An (cs) | | Marcus & Marcus 1968 |
| <i>Notocomplana martae</i> (Marcus, 1948) | br | | Marcus 1948 |
| <i>Notocomplana syntoma</i> (Marcus, 1947) | br | | Marcus 1947 |
| Pleioplanidae | | | |
| <i>Pleioplana atomata</i> (O. F. Muller, 1776) | eu (fl) | | Pearse 1938, Hyman 1940 |
| <i>Pleioplana megala</i> (Marcus, 1952) | br an (cs) | | Marcus 1952, Marcus & Marcus 1968 |
| <i>Melloplana ferruginea</i> (Schmarda, 1859) | an (bn cs) bd co (sp tay) eu (pr) ja | PM A12375, USNM 20424, INV-PLA 0014, INV-PLA 0015, INV-PLA 0016, INV-PLA 0018 HS | Hyman 1939a, Hyman 1955a, Hyman 1955b, Hyman 1939b, Marcus & Marcus 1968, Quiroga <i>et al.</i> 2004 |
| Gnesioceridae | | | |
| <i>Gnesioceros floridiana</i> (Pearse, 1938) | an (vi) eu (fl tx) | USNM 20190 | Hyman 1940, Hyman 1955b |
| <i>Gnesioceros sargassicola</i> (Mertens, 1833) | an (bn cs vi) bd co (tay) eu (fl pr) ic | BOC 1049, BOC 1050 A-B, INV-PLA 0021 HS | Hyman 1939c, Marcus & Marcus 1968 |
| <i>Styloplanocera fasciata</i> (Schmarda, 1859) | an (bn cs) co (tay) eu (sx pr) ja | INV-PLA 0022, INV-PLA 0023, INV-PLA 0024, INV-PLA 0025 HS | Hyman 1955b, Marcus & Marcus 1968 |
| <i>Planctoplanella atlantica</i> Hyman, 1940 | eu (nc) an (sc) | USNM 20534 | Hyman 1940 |
| COTYLEA | | | |
| Pseudocerotidea | | | |
| Boniniidae | | | |
| <i>Boninia antillarum</i> (Hyman, 1955) | an (bn cs vi) | USNM 24630 | Marcus & Marcus 1968 |
| <i>Boninia divae</i> Marcus & Marcus, 1968 | an (cs) co (tay) | INV-PLA 0026, INV-PLA 0027, INV-PLA 0029 HS | Marcus & Marcus 1968, Quiroga <i>et al.</i> 2004 |

| Taxón /Taxon | Distribución en el Atlántico Tropical Occidental / Distribution in the Tropical Western Atlantic | Colección de referencia /Reference Collection | Literatura /Literature |
|---|--|---|---|
| <i>Paraboninia caymanensis</i> Prudhoe, 1944 | ic | | Prudhoe 1944 |
| Pericelidae | | | |
| <i>Pericelis cata</i> Marcus & Marcus, 1968 | an (cs) co (tay) | INV-PLA 0030, INV-PLA 0031 HS | Marcus & Marcus 1968 |
| <i>Pericelis orbicularis</i> (Schmarda, 1859) | eu (fl tx) ja | | Hyman 1955a, Marcus & Marcus 1968 |
| Pseudocerotidae | | | |
| <i>Pseudoceros bicolor</i> Verrill, 1901 | an (cs) bh co (tay) | INV-PLA 0032, INV-PLA 0033 HS | Marcus & Marcus 1968, Quiroga et al. 2004 |
| <i>Pseudoceros chloreus</i> Marcus, 1949 | br | | Marcus 1949 |
| <i>Pseudoceros mopsus</i> (Marcus, 1952) | an (at bb cs) co (tay) | INV-PLA 0034, INV-PLA 0035 HS | Marcus 1952, Marcus & Marcus 1968 |
| <i>Pseudoceros pardalis</i> Verrill, 1900 | bn | ZMUH V13187, ZMUH V13186 | Verrill 1900 |
| <i>Pseudoceros texanus</i> Hyman, 1955 | an (bn) eu (fl tx) | | Hyman 1955a, Marcus & Marcus 1968 |
| <i>Thysanozoon nigrum</i> Girard, 1851 | bd an (bn) eu (fl tx) | BOC 1054 A-I | Hyman 1939c, Hyman 1940, Hyman 1955a, Hyman 1955b, Marcus & Marcus 1968 |
| <i>Thysanozoon brocchii</i> (Risso, 1818) | an (cs) eu (fl) | | Marcus 1947, Marcus 1952, Marcus & Marcus 1968, Hyman 1940, Pearse 1938 |
| <i>Thysanozoon flavotuberculatum</i> Hyman, 1939 | bd | BOC 1054 A-I | Hyman 1939c |
| <i>Thysanozoon griseum</i> Verrill, 1901 | bd | | Verrill 1901 |
| <i>Acanthozoon maculosum</i> (Pearse, 1938) | eu (fl) | USNM 20191 | Pearse 1938, Hyman 1940 |
| <i>Cryptoceros aureolineatus</i> (Verrill, 1901) | bd | BOC 1056 A-G | Verrill 1901, Hyman 1939c |
| <i>Cryptoceros crozieri</i> (Hyman, 1939) | bd an (cs) eu (fl) | BOC 1055 A-G | Hyman 1939c, Marcus & Marcus 1968 |
| <i>Pseudobioceros evelinae</i> (Marcus, 1950) | br | | Marcus 1950 |
| <i>Pseudobioceros splendidus</i> (Lang, 1884) | bd | | Hyman 1939c, Verrill 1900 |
| Euryleptidae | | | |
| <i>Eurylepta aurantiaca</i> Heath & Mc Gregor, 1912 | co (tay) | INV-PLA 0038, | Quiroga et al. 2004 |
| <i>Eurylepta multiceles</i> (Hyman, 1955) | eu (fl pr) | USNM 24627, USNM 24628, USNM 24629 | Hyman 1955b |
| <i>Eurylepta piscatoria</i> (Marcus, 1947) | an (bn) eu (fl) | | Marcus 1947, Marcus & Marcus 1968 |
| <i>Eurylepta turma</i> Marcus, 1952 | br | | Marcus 1952 |
| <i>Acerotisa baiiae</i> Hyman, 1940 | eu (fl) | USNM 20535 | Hyman 1940, Hyman 1952 |
| <i>Acerotisa bituna</i> Marcus, 1947 | an (cs) | | Marcus 1947, Marcus & Marcus 1968 |
| <i>Acerotisa leuca</i> Marcus, 1947 | br | | Marcus 1947 |
| <i>Acerotisa notulata</i> (Bosc, 1801) | an (cs) | BOC 1057 | Hyman 1939c, Hyman 1955b |
| <i>Prostheceraeus maculosus</i> (Verrill, 1892) | eu (fl) | | Pearse 1938, Hyman 1940, Hyman 1952 |
| <i>Prostheceraeus floridanus</i> Hyman, 1955 | eu (fl) me | USNM 24632 | Hyman 1955b |
| <i>Prostheceraeus zebra</i> Hyman, 1955 | eu (fl) ja me | | Hyman 1955a |
| <i>Cycloporus gabriellae</i> Marcus, 1950 | an (ac cs) | | Marcus 1950, Marcus 1952, Marcus & Marcus 1968 |
| <i>Oligoclado floridanus</i> Pearse, 1938 | eu (fl nc) | USNM 20192 | Pearse 1938, Hyman 1940 |
| Prosthiostomidae | | | |
| <i>Prosthiostomum cyclops</i> (Verrill, 1901) | bd an (bn) | PM A12377 | Verrill 1901, Hyman 1939c, Marcus & Marcus 1968 |
| <i>Prosthiostomum cynarium</i> Marcus, 1950 | br | | Marcus 1950 |
| <i>Prosthiostomum gilvum</i> Marcus, 1950 | br co (tay) | INV-PLA 0039, INV-PLA 0040, INV-PLA 0041, INV-PLA 0042 HS | Marcus 1950, Quiroga et al. 2004 |
| <i>Prosthiostomum lobatum</i> Pearse, 1938 | an (sv) eu (fl nc) | USNM 20194 | Pearse 1938, Hyman 1940 |
| <i>Prosthiostomum milcum</i> Marcus & Marcus, 1968 | an (bn) eu (fl) | | Marcus & Marcus 1968 |

| Taxón /Taxon | Distribución en el Atlántico Tropical Occidental / Distribution in the Tropical Western Atlantic | Colección de referencia /Reference Collection | Literatura /Literature |
|---|---|--|---|
| <i>Prosthiosomum utarum</i> Marcus, 1952 | br eu (fl) co (tay) | INV-PLA 0048 | Marcus 1952, Quiroga <i>et al.</i> 2004, Marcus & Marcus 1968 |
| <i>Enchiridium evelinae</i> Marcus, 1949 | an (cs) | | Marcus 1949, Marcus & Marcus 1968 |
| <i>Enchiridium gabriellae</i> (Marcus, 1949) | br | | Marcus 1949 |
| <i>Enchiridium periommatum</i> Bock, 1913 | eu (fl) ja me | | Hyman 1955a, Hyman 1955b |
| <i>Enchiridium punctatum</i> Hyman, 1953 | co (tay) | INV-PLA 0043, INV-PLA 0044 HS | Quiroga <i>et al.</i> 2004 |
| <i>Euprosthiosomum matarazzo</i> (Marcus, 1950) | an (bn) co (tay) | INV-PLA 0046, INV-PLA 0047 HS | Marcus 1950, Marcus & Marcus 1968, Quiroga <i>et al.</i> 2004 |
| <i>Euprosthiosomum mortenseni</i> Marcus, 1948 | | | Marcus 1948 |
| <i>Euprosthiosomum pakium</i> Marcus & Marcus, 1968 | eu (fl) | | Marcus & Marcus 1968 |
| <i>Euprosthiosomum pulchrum</i> (Bock, 1913) | an (at bb bn cs vi) eu (sx) | | Hyman 1955b, Marcus & Marcus 1968 |

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Literatura Citada / Literature Cited

- Cannon L. R. G. (1986) Turbellaria of the world, A guide to families and genera Queensland Museum, Brisbane, Australia, 136 pp.
- Ehlers U. (1986) Comments on a phylogenetic system of the Platyhelminthes *Hydrobiologia* 132:1-12.
- Faubel A. (1983) The Polycladida, Turbellaria. Proposal and establishment of a new system. Part I. The Acotylea *Mitteilungen aus dem hamburgischen zoologischen Museum und Institut* 80:17-121.
- Faubel A. (1984) The Polycladida, Turbellaria. Proposal and establishment of a new system. Part II. The Cotylea *Mitteilungen aus dem hamburgischen zoologischen Museum und Institut* 81:189-259.
- Galleni L, P. Tongiorgi, E. Ferrero, U. Salghetti (1980) *Stylochus mediterraneus* (Turbellaria: Polycladida), predator on mussel *Mytilus galloprovincialis* *Marine Biology* 55:317-326.
- Hyman L.H. (1939a) New species of flatworms from North, Central and South America *Proceedings of the United States National Museum* 86(3055): 419-439.
- Hyman L. H. (1939c) Acoela and polyclad Turbellaria from Bermuda and the Sargassum *Bulletin of the Bingham Oceanographic Collection* 7 (art 1):1-26.
- Hyman L. H. (1939d) Polyclad worms collected on the presidential Cruise of 1938 *Smithsonian Miscellaneous Collections* 98 (17):1-13.
- Hyman L. H. (1940) The polyclad flatworms of the Atlantic coast of the United States and Canada *Proceedings of the United States National Museum* 89:449-495.
- Hyman L. H. (1951) The invertebrates: Vol. II. Platyhelminthes and Rhynchocoela; the acelomate Bilateria McGraw-Hill, New York, 572 pp.
- Hyman L. H. (1952) Further notes on the turbellarian fauna of the Atlantic coast of the United States *Biological Bulletin* 103:195-201.

- Hyman L. H. (1955a) A further study of the polyclad flatworms of the West Indian Region *Bulletin of Marine Science of the Gulf and Caribbean* 5:259-268.
- Hyman L. H. (1955b) Some polyclad flatworms from the West Indies and Florida *Proceedings of the United States National Museum* 104 (3341):115-150.
- Karling T. G. (1974) On the anatomy and affinities of the turbellarian orders pp.1-16 En: Riser N. W., M. P. Morse (eds.) *Biology of the Turbellaria* McGraw-Hill, New York.
- Klauser M. D. J. P. S. Smith, S. Tyler (1986) Ultrastructure of the frontal organ in *Convoluta* and *Macrostomum* spp.: significance for models of the turbellarian archetype *Hydrobiologia* 132:47-52.
- Lang A. (1884) Die Polycladen des Golfes von Neapel und der angrenzenden Meeresabschnitte *Eine Monographie. Fauna und Flora des Golfes von Neapel* Leipzig 11:1-668
- Marcus E. (1947) Turbellários marinhos do Brasil *Boletim da facultade de filosofia ciencias y letras de Sao Paulo Zoologia* No 12:93-215.
- Marcus E. (1948) Turbellaria do Brasil *Boletim da facultade de filosofia ciencias y letras de Sao Paulo Zoologia* No 13:111-243.
- Marcus E. (1949) Turbellaria Brasileiros (7) *Boletim da facultade de filosofia ciencias y letras de Sao Paulo Zoologia* No 14:7-155.
- Marcus E. (1950) Turbellaria Brasileiros (8) *Boletim da facultade de filosofia ciencias y letras de Sao Paulo Zoologia* No 15:5-192.
- Marcus E. (1952) Turbellaria Brasileiros (10) *Boletim da facultade de filosofia ciencias y letras de Sao Paulo Zoologia* No 17:5-188.
- Marcus E. (1954) Turbellaria Brasileiros (11) *Papeis avulsos do departamento de Zoologia. Secrataria da a gricultura* No 11:419-489.
- Marcus E., E. Marcus (1968) Polycladida from Curaçao and faunistically related regions *Studies on the fauna of Curaçao* 26 (101):1-106.
- Miyazawa K., J. K. Jeon, T. Noguchi, K. Ito, K. Hashimoto (1987) Distribution of tetrodotoxin in the tissues of the flatworm *Planocera multitentaculata* (Platyhelminthes) *Toxicon* 25:975-980.
- Newman L. J., L. R. G. Cannon (1993) *Stylochus (Imogene) matatasi* n. sp. (Platyhelminthes, Polycladida): pest of culture clams and pearl oysters from Solomon Islands *Hidrobiologia* 257:185-189.
- Newman L. J., L. R. G. Cannon (1994) *Pseudoceros* and *Pseudobioceros* (Platyhelminthes, Polycladida, Pseudocerotidae) from eastern Australia and Papua New Guinea *Memoirs of the Queensland Museum* 37: 205-266.
- Newman L. J., L. R. G. Cannon (1996a) *Bulaceros* new genus and *Tytthosoceros*, new genus (Platyhelminthes, Polycladida, Pseudocerotidae) from the Great Barrier Reef, Australia and eastern Papua New Guinea *The Raffles Bulletin of Zoology* 44:479-492.
- Newman L. J., L. R. G. Cannon (1996b) New genera of pseudocerotid flatworms (Platyhelminthes, Polycladida) from Australian and Papua New Guinean coral reefs *Journal of Natural History* 30:1425-1441.
- Newman L. J., L. R. G. Cannon (1997a) A new semi-terrestrial acotylean flatworm, *Myoramixa pardalota* gen. et sp. nov. (Platyhelminthes, Polycladida) from southeast Queensland *Memoirs of the Queensland Museum* 42:311-314.
- Newman L. J., L. R. G. Cannon (1997b) Nine new *Pseudobioceros* (Platyhelminthes, Polycladida, Pseudocerotidae) from the Indo-Pacific region *The Raffles Bulletin of Zoology* 45:341- 368.
- Newman L. J., L. R. G. Cannon (1998) *Pseudoceros* (Platyhelminthes, Polycladida) from the Indo-Pacific with twelve new species from Australia and Papua New Guinea *The Raffles Bulletin of Zoology* 46:293-323.
- Newman L. J., L. R. G. Cannon (2000) A new genus of euryleptid flatworm (Platyhelminthes, Polycladida) from the Indo-Pacific *Journal of Natural History* 34:191-205.
- Newman L. J., L. R. G. Cannon (2002) The genus *Cycloporus* (Platyhelminthes, Polycladida) from Australasian waters *The Raffles Bulletin of Zoology* 50 (2):287-299.
- Quiroga S. Y., D.M. Bolaños, M.K. Litvaitis (2004) A check list of polyclad flatworms (Platyhelminthes: Polycladida) from the Caribbean coast of Colombia, South America *Zootaxa* 633:1-12.
- Pearse A. S. (1938) Polyclads of the East Coast of North America *Proceedings of the United States National Museum* 86:67-97.
- Pearse A. S., G. W. Wharton (1938) The oyster "leech," *Stylochus inimicus* Palombi, associated with oysters on the coast of Florida *Ecological Monographs* Vol. 8 No 4:605-655.
- Prudhoe S. (1944) On some polyclad turbellarians from the Cayman Islands *Annals and Magazine of Natural History*, (11)11:322-334.
- Prudhoe S. (1985) A monograph on polyclad Turbellaria British Museum (Natural History) Oxford University Press, New York, 259 pp.
- Schupp P., C. Eder, P. Proksch, V. Wray, B. Schneider, M. Herderich, V. Paul (1999) Staurosporine derivatives from the ascidian *Eudistoma toetalensis* and its predatory flatworm *Pseudoceros* sp. *Journal of Natural Products* 62:959-962.

- Smith J. P. S., S. Tyler (1986) Frontal organs in the Acoelomorpha (Turbellaria): ultrastructure and phylogenetic significance *Hydrobiologia* 132:71-78.
- Smith J. P. S., S. Tyler, R. M. Rieger (1986) Is the Turbellaria polyphyletic? *Hydrobiologia* 132:13-21.
- Verrill A. E. (1900) Additions to the Turbellaria, Nemertina and Annelida of the Bermudas, with revisions of

some New England genera and species *Transactions of the Connecticut Academy of Arts and Sciences* Vol. X Part 2:595-701.

- Verrill A. E. (1901) Additions to the fauna of the Bermudas from the Yale Expedition of 1901, with notes on the species *Transactions of the Connecticut Academy of Arts and Sciences* 11:15-62.

Anexo / Appendix

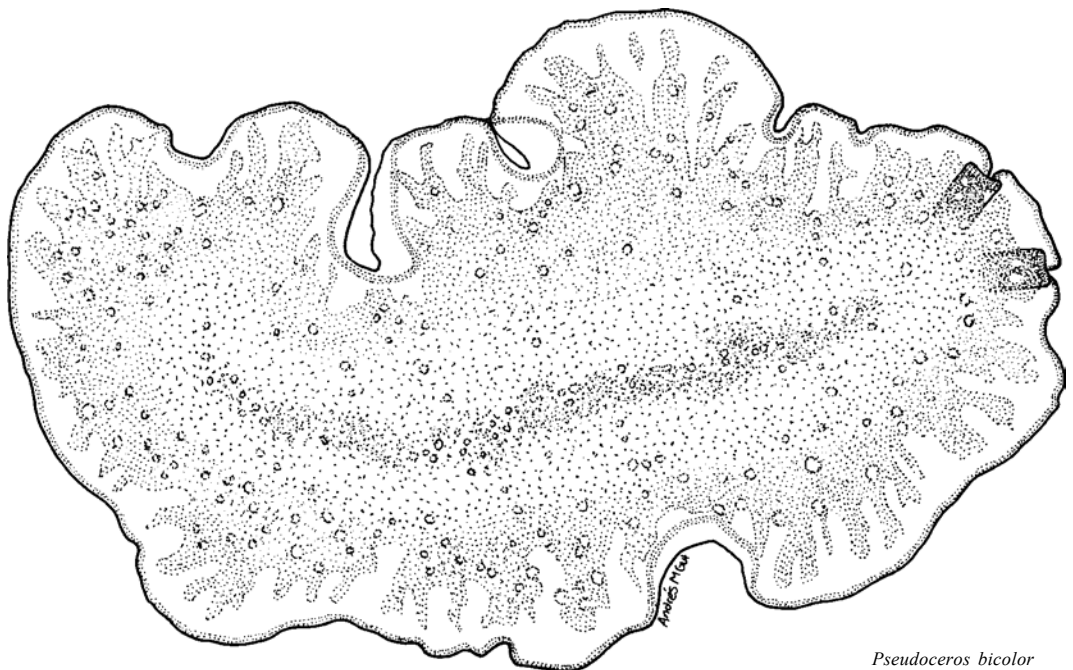
Listado de sinónimos / List of Synonyms

- Acanthozoon maculosum*** (Pearse, 1938)
 = *Pseudoceros maculosum* Pearse, 1938
 = *Pseudoceros (Acanthozoon) maculosum* (Pearse, 1938) Du Bois-Reymond, Marcus 1955
- Acerotisa notulata*** (Bosc, 1901)
 = *Planaria notulata* Bosc, 1901
- Adenoplana obovata*** (Schmarda, 1859)
 = *Polycelis obovata* Schmarda, 1859
 = *Leptoplana obovata* Diesing 1862.
- Alloioiplana aulica*** (Marcus, 1947)
 = *Stylochoplana aulica* Marcus, 1947
- Alloioiplana wyona*** (Marcus & Marcus, 1968)
 = *Stylochoplana wyona* Marcus & Marcus, 1968
- Aprostatum clippertoni*** (Hyman, 1939)
 = *Euplana clippertoni* Hyman, 1939
- Armatoplana lactoalba*** (Verrill, 1900)
 = *Leptoplana lactoalba* Verrill, 1900
 = *Leptoplana lactoalba* var. *tincta* Verrill, 1902
 = *Stylochoplana lactoalba* (Verrill) Bock 1913
 = *Notoplana lactoalba* (Verrill) Hyman 1939
- Armatoplana leptalea*** (Marcus, 1947)
 = *Stylochoplana leptalea* Marcus, 1947
- Armatoplana rabita*** (Marcus & Marcus, 1968)
 = *Candimba rabita* Marcus & Marcus, 1968
- Armatoplana snadda*** (Marcus & Marcus, 1968)
 = *Stylochoplana snadda* Marcus & Marcus, 1968
- Boninia antillarum*** (Hyman, 1955)
 = *Adenoplana antillarum* Hyman, 1955
- Cestoplana rubrocincta*** (Grube, 1840)
 = *Orthostomum rubrocinctum* Grube, 1840
 = *Orthostoma rubrocincta* Oersted 1844
 = *Typhlolepta rubrocincta* Stimpson, 1845
 = *Tricelis fasciatus* Quatrefages, 1845
 = *Cestoplana filiformis* Laidlaw, 1903
 = *Cestoplana australis* Haswell, 1907.
- Cestoplanella microps*** (Verrill, 1901)
 = *Trigonoporus microps* Verrill, 1901
 = *Cestoplana microps* (Verrill) Hyman 1939
- Cryptoceros aureolineatus*** (Verrill, 1901)
 = *Pseudoceros aureolineatus* Verrill, 1901
 = ***Cryptoceros crozieri*** (Hyman, 1939) Faubel 1984
 = *Pseudoceros crozieri* Hyman, 1939
- Chatziplana grubei*** (Graff, 1892)
 = *Planocera grubei* Graff, 1892
 = *Hoploplana grubei* (Graff) Laidlaw 1902
- Comoplana angusta*** (Verrill, 1983)
 = *Leptoplana angusta* Verrill, 1983
 = *Stylochoplana angusta* (Verrill) Hyman 1939
 = *Zyganthroplana angusta* (Verrill) Hyman 1950
- Coronadena mutabilis*** (Verrill, 1873)
 = *Polycelis mutabilis* Verrill, 1873
 = *Discocelis mutabilis* (Verrill) Verrill 1893
 = *Discocelis grisea* Pearse, 1938
- Distylochus martae*** (Marcus, 1947)
 = *Stylochus martae* Marcus, 1947
- Digynopora americana*** Hyman, 1940
 = *Leptoplana angusta* Pearse & Littler, 1938

- Enchiridium gabriellae*** (Marcus, 1949)
 = *Prosthlostomum gabriellae* Marcus, 1949
 = *Lurymare gabriellae* (Marcus)
 Marcus & Marcus 1968
- Eulatocestus caribbeanus*** (Prudhoe, 1944)
 = *Latocestus caribbeanus* (Prudhoe, 1944)
- Euplana carolinensis*** Hyman, 1940
 = *Leptoplana angusta* Pearse & Littler, 1938
- Euplana gracilis*** (Girard, 1850)
 = *Prosthlostomum gracile* Girard, 1850
 = *Elasmodes gracilis* (Girard) Stimpson 1857
 = *Leptoplana gracilis* (Girard) Diesing 1862
 = *Conjuguterus parvus* Pearse, 1938
- Euprosthlostomum matarazzoii*** (Marcus, 1950)
 = *Prosthlostomum matarazzoii* Marcus, 1950
 = *Lurymare matarazzoii* (Marcus)
 Marcus & Marcus 1968
- Euprosthlostomum pakium*** (Bock, 1913)
 = *Prosthlostomum pulchrum* Bock, 1913
- Eurylepta multicelis*** (Hyman, 1955) Faubel 1984
 = *Acerotisa multicelis* Hyman, 1955
- Eurylepta piscatoria*** (Marcus, 1947)
 = *Acerotisa piscatoria* Marcus, 1947
- Heroplana bayeri*** (Marcus & Marcus, 1968)
 = *Stylochoplana bayeri* Marcus & Marcus, 1968
- Hoploplana inquilina*** (Wheeler, 1894) Bock 1913
 = *Planocera inquilina* Wheeler, 1894
 = *Hoploplana thaisana* Pearse, 1938
 = *Hoploplana inquilina thaisana* (Pearse) Hyman,
 1940
- Ilyella yrsa*** (Marcus & Marcus, 1968)
 = *Zyantropilana yrsa* Marcus & Marcus, 1968
- Ilyplanoidea**
 = Emprostomatidea
- Interplana evelinae*** (Marcus, 1952)
 = *Stylochoplana evelinae* Marcus, 1952
- Itannia ornata*** Marcus, 1947
 = *Itannia ornata* var. *murna* Bois-Reymond
 Marcus, 1957

- Gnesioceros floridiana*** (Pearse, 1938)
 = *Imogine oculifera* (Verrill, 1892) Girard 1853
 = *Stylochoplana floridiana* Pearse, 1938
 = *Gnesioceros verrilli* Hyman, 1939
 = *Stylochoplana oculifera* Pearse & Walker 1939
- Gnesioceros sargassicola*** (Mertens, 1833)
 = *Planaria sargassicola* Mertens, 1833
 = *Stylochus sargassicola* (Mertens) Ehrenberg
 1836
 = *Planocera sargassicola* (Mertens) Oersted 1844
 = *Stylochus mertensi* Diesing, 1850
 = *Gnesioceros mertensi* (Diesing) Diesing 1862
 = *Stylochus pelagicus* Moseley, 1877
 = *Planocera pelagica* (Moseley) Lang 1884
 = *Stylochoplana sargassicola* (Mertens) Graff
 1892
 = *Pelagoplana sargassicola* (Mertens) Bock 1913
- Latocestus callizona*** (Marcus, 1947)
 = *Alleena callizona* Marcus, 1947
- Latocestus whartoni*** (Pearse, 1938)
 = *Oculoplana whartoni* Pearse, 1938
- Melloplana ferruginea*** (Schmarda, 1859)
 = *Polycelis ferruginea* Schmarda, 1859
 = *Leptoplana ferruginea* (Schmarda) Diesing 1862
 = *Discocelis binocularata* Verrill, 1901
 = *Notoplana bahamensis* Bock, 1913
 = *Notoplana ferruginea* (Schmarda) Stummer-
 Traunfels 1933
 = *Notoplana binocularata* (Verrill) Hyman 1939
 = *Notoplana caribbeana* Hyman, 1939
- Notocomplana evelinae*** (Marcus, 1947) Faubel 1983
 = *Pucelis evelinae* Marcus, 1947
- Notocomplana lapunda*** (Marcus & Marcus, 1968) Faubel 1983
 = *Notoplana lapunda* Marcus & Marcus, 1968
- Notocomplana martae*** (Marcus, 1948)
 = *Notoplana martae* Marcus, 1948
- Notocomplana syntoma*** (Marcus, 1947)
 = *Notoplana syntoma* Marcus, 1947
- Notoplana tipuca*** (Marcus & Marcus, 1968)
 = *Igluta tipuca* Marcus & Marcus, 1968
- Oligoclado floridanus*** Pearse, 1938
 = *Hymania prytherchi* Pearse & Littler, 1938
- Pericelis orbicularis*** (Schmarda, 1859)
 = *Eurylepta orbicularis* Schmarda, 1859
 = *Proceros orbicularis* (Schmarda) Diesing 1862

- Phaenocelis purpurea*** (Schmarda, 1859)
 = *Leptoplana purpurea* Schmarda, 1859
 = *Comprostatum insularis* Hyman, 1944
 = *Phaenocelis insularis* (Hyman) Marcus 1952
- Phaenoplana longipenis*** (Hyman, 1953)
 = *Stylochoplana longipenis* Hyman, 1953
- Phaenoplana peleca*** (Marcus & Marcus, 1968)
 = *Phaenocelis peleca* Marcus & Marcus, 1968
- Pleioplana atomata*** (O. F. Muller, 1776)
 = *Planaria atomata* O. F. Muller, 1776
 = *Planaria punctata* O. F. Muller, 1776
 = *Planaria atomata* Delle Chiaje, 1841
 = *Leptoplana atomata* (O. F. Muller) Oersted 1843
 = *Leptoplana droebachensis* Oersted, 1843
 = *Polycelis fallax* Quatrefages, 1845
 = *Polycelis variabilis* Girard, 1850
 = *Leptoplana variabilis* (Girard) Diesing 1862
 = *Planaria maculata* Dalyell, 1853
 = *Leptoplana fallax* (Quatrefages) Diesing 1862
 = *Leptoplana ellipsoides* Verrill, 1893
 = *Leptoplana virilis* Verrill, 1893
 = *Notoplana virilis* (Verrill) Bock 1913
 = *Notoplana atomata* (O. F. Muller) Bock 1913
 = *Notoplana fallax* (Quatrefages) Bock 1913
 = *Leptoplana angusta* Pearse, 1938
- Pleioplana megala*** (Marcus, 1952)
 = *Notoplana megala* Marcus, 1952
- Plehnia ellipsoides*** (Girard, 1854)
 = *Leptoplana ellipsoides* Girard, 1854
 = *Discocelides ellipsoides* (Girard) Hyman 1940
- Prolatocestus ocellatus*** (Marcus, 1947)
 = *Latocestus ocellatus* Marcus, 1947
- Prostheceraeus maculosus*** (Verrill, 1892)
 = *Eurylepta maculosa* Verrill, 1892
- Prosthiostomum cyclops*** (Verrill, 1901)
 = *Discocelis cyclops* Verrill, 1901
- Prosthiostomum utarum*** Marcus, 1952
 = *Lurymare utarum* (Marcus, 1952) Marcus & Marcus 1968
- Pseudobioceros evelinae*** (Marcus, 1950) Faubel 1984
 = *Pseudoceros evelinae* Marcus, 1950
- Pseudobioceros splendidus*** (Lang, 1884)
 = *Pseudoceros superbus* Lang, 1884
 = *Pseudoceros splendidus* (Lang) Stummer-Traunfels 1933
- Spinantia pellucida*** (Pearse, 1938)
 = *Acerotisa pellucida* Pearse, 1938
 = *Enantia pellucida* (Pearse) Hyman 1940
- Stylochocestus hewatti*** (Hyman, 1955)
 = *Indistylachus hewatti* Hyman, 1955
- Stylochoplana alcha*** (Marcus & Marcus, 1968) Faubel 1983
 = *Notoplanides alcha* Marcus & Marcus, 1968
- Stylochoplana divae*** (Marcus, 1949)
 = *Candimba divae* Marcus, 1949
- Styloplanocera fasciata*** (Schmarda, 1859)
 = *Stylochus fasciatus* Schmarda, 1859
 = *Styloplanocera papillifera* Bock, 1913
 = *Stylochoplana fasciata* (Schmarda) Lang 1884
- Stylochopsis ellipticus*** (Girard, 1850)
 = *Planocera elliptica* Girard, 1850
 = *Stylochopsis littoralis* Verrill, 1873
 = *Stylochus littoralis* (Verrill) Lang 1884
 = *Eustylochus ellipticus* (Girard) Verrill 1892
 = *Eustylochus meridionalis* Pearse, 1938
 = *Stylochus ellipticus* (Girard) Hyman 1939
- Stylochus catus*** Marcus & Marcus, 1968
 = ***Stylochus (Imogine) megalops*** (Schmarda, 1859) Stummer-Traunfels 1933
 = *Dicelis megalops* Schmarda, 1859
 = *Diopsis megalops* (Schmarda) Diesing 1862
 = *Stylochus heteroglenus* Schmarda, 1859
 = *Planocera heteroglana* (Schmarda) Lang, 1884
 = *Stylochus megalops* (Schmarda) Stummer-Traunfels 1933
- Stylochus (Imogine) oculiferus*** Girard, 1853
 = *Imogine oculifera* Girard, 1853
 = *Stylochus oculiferus* (Girard) Diesing 1862
 = *Stylochus floridanus* Pearse, 1938
- Stylochus (Imogine) zebra*** (Verrill, 1882)
 = *Stylochopsis zebra* Verrill, 1882
- Stylochus (Stylochus) frontalis*** Verrill, 1892
 = *Stylochus inimicus* Palombi, 1931
 = *Stylochus tenax* Palombi, 1936

Thysanozoon nigrum Girard, 1851= *Thysanozoon brocchii* var. *nigrum* Lang, 1884***Thysanozoon brocchii*** (Risso, 1818)= *Tergipes brocchii* Risso, 1826= *Planaria brocchii* (Risso) Risso 1826= *Planaria tuberculata* Delle Chiaje, 1828= *Planaria verrucosa* Delle Chiaje, 1829= *Stylochus papillosus* Diesing, 1836= *Thysanozoon diesingi* Grube, 1840= *Thysanozoon papillosum* (Diesing) Grube 1840= *Thysanozoon tuberculatum* (Delle Chiaje) Grube 1840= *Planaria dicquemaris* Delle Chiaje, 1841= *Planaria dicquemaris* var. *verrucosa* (Delle Chiaje, 1829) Delle Chiaje 1841= *Thysanozoon dicquemaris* (Delle Chiaje) Oersted 1844= *Eolidiceros panormus* Quatrefages, 1845= *Eolidiceros brocchii* (Risso) Quatrefages 1845= *Thysanozoon panormus* (Quatrefages) Diesing 1850= *Thysanozoon fockei* Diesing, 1850= *Thysanozoon* spec. Schultze, 1854= *Planeolis panormus* (Quatrefages) Stimpson 1857= *Thysanozoon* spec. Moseley, 1877= *Thysanozoon brocchii* var. *cruciatum* Laidlaw, 1906= *Thysanozoon lagidium* Marcus, 1949*Pseudoceros bicolor*

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