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CERTIFICADO
DE REPORTE

1. INFORMACIÓN DEL CERTIFICADO

Número de certificado: **16EE7D14FF3**

Fecha de la última actualización del conjunto de datos: **2019-12-09**

URL del conjunto de datos: https://ipt.biodiversidad.co/cr-sib/resource.do?r=1293_08_12_19_phylogenomic_relationships

Número de registros biológicos reportados: **40**

2. INFORMACIÓN DEL PERMISO

Autoridad

Autoridad Nacional de Licencias Ambientales

Número del permiso

1293

Titular

Universidad del Magdalena

Nit o cédula

891.780.111-8

Fecha de emisión del permiso

2013-12-18

3. INFORMACIÓN DEL RECURSO

Título del proyecto

PHYLOGENOMIC RELATIONSHIPS OF VETIGASTROPODA (MOLLUSCA, GASTROPODA)

Resumen

Gastropoda is the most diverse class in the phylum Mollusca and one of the most successful in the animal kingdom, with an estimated 40k to 150k living species [1-4]. The class has an old and long fossil record (15k species) that dates back to the Cambrian [5]. The classification of Gastropoda has been the subject of several seminal studies [2, 6-9]. Currently, the gastropods are classified in [10]: Caenogastropoda, Cocculiniformia, Heterobranchia, Neomphalina, Neritimorpha, Patellogastropoda, Vetigastropoda. Ponder and Lindberg [11] rebuilt the most important morphological tree of Gastropoda, and subdivided in, Eogastropoda (Patellogastropoda) and Orthogastropoda (remaining groups). Within Eogastropoda, these authors united the Heterobranchia and Caenogastropoda into the clade Apogastropoda. However, these phylogenetic relationships have not been recovered by molecular data [1, 12-23].

Several recent studies of the evolutionary history of Gastropoda have faced limitations such as lack of resolution [1, 12-16] and long-branch attraction [20-23]. More recently, phylogenomic analyses reconstructed a well-supported evolutionary hypothesis of Gastropoda, but are missing key taxa, such as Neomphalina and Cocculinifomia, that could help to resolve the deeper relationships [17-19]. The subclass Vetigastropoda is a group that is exclusively marine, and distributed worldwide at all latitudes and bathymetric ranges, with its origin in the transition from the Cambrian to the Ordovician [5]. It includes around 3.7k living species with a large morphological diversity [24]. Initially, Vetigastropoda was proposed by Salvini-Plawen [8] to including the Zeugobranchia (with paired pallial organs), Trochoidea (with asymmetric pallial organs) and Cocculinoidea. Since the discovery of several taxa associated with hydrothermal vents, this clade has been redefined on a several occasions [25-29]. Similarly, its internal relationships, as well as relationships with the other large groups of gastropods have been and are still under discussion [2, 9, 11, 24, 30-35]. Lepetelloidea, originally proposed within Cocculinifomia [36] was later included within Vetigastropoda in phylogenetic analyses [11, 33, 34]. Several authors [10], [20] and [34] have included within Vetigastropoda the following superfamilies: Pleurotomarioidea, Fissurelloidea, Haliotioidea, Scissurelloidea, Lepetelloidea, Lepetodriloida, Neomphaloidea, Seguenzioidea, Trochoidea and Turbinoidea. However, the position of Neomphalina has been very controversial and some authors considered it to be an independent group outside the Vetigastropoda [1, 14, 23, 24, 35, 37]. Some molecular analyses exclude Pleurotomarioidea from Vetigastropoda [1, 24, 35] or recover it as a sister group of the rest of Vetigastropoda [34]. Other studies exclude Lepetelloidea from Vetigastropoda [24]. Still others [38] elevated to superfamily level two groups previously included within the Trochoidea: Angarioidea and Phasianelloidea [39, 40]. However, more recent studies with a substantial increase in the amount of molecular data have shown close relation of Angarioidea, Phasianelloidea and Trochoidea [23, 41-43].

Palabras clave

Occurrence, Specimen

3.1 Contacto del recurso

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3.4 Cobertura geográfica

Incluye bahías y litorales rocosos donde se colectaron las muestras Coordenadas: 11°0'0"N y 11°0'0"N Latitud; 74°0'0"E y 74°0'0"E Longitud

3.5 Cobertura taxonómica

Se recolectaron individuos del orden Gasteropoda.

3.6 Cobertura temporal

30 de noviembre de 2018 - 12 de diciembre de 2018

3.7 Métodos de muestreo

The samples will be obtained from fieldwork in order to get freshly collected material. Two sites will be sampled, Santa Marta beaches, at the Colombian Caribbean, and the Smithsonian Marine Station at Fort Pierce in the US. Ideally, a comprehensive tree of the Vetigastropoda will include representatives of each superfamily, as well as samples of the outgroups Cocculiniformia. Specimens of Haliotoidea will not necessary, as this superfamily has several robust

transcriptomes files SRA available in GenBank (>3Gb). In the case of superfamilies that include several families, i.e., Scissurelloidea, Seguenzioidea, and especially Trochoidea and Lepetelloidea (both with eight families), a major effort will be required to include multiple families. Samples of several taxa from the North-East Atlantic and the Mediterranean Sea will be provided through of the MNCN-CSIC of Madrid Spain, while samples from Indo-Pacific region and from Africa will be provided by Yasunori Kano (Tokyo University) and David Herbert (NMSA), and finally, the samples from South America will be provided by Juan E. Uribe (NMNH-SI) and Lyda Raquel Castro (both from Universidad del Magdalena).

3.8 Datos del proyecto

Título

PHYLOGENOMIC RELATIONSHIPS OF VETIGASTROPODA (MOLLUSCA, GASTROPODA)

Nombre

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Rol

Investigador Principal

Descripción del área de estudio

La veracidad de este certificado se puede corroborar en la siguiente dirección web:

https://ipt.biodiversidad.co/cr-sib/pdf.do?r=1293_08_12_19_phylogenomic_relationships&n=16EE7D14FF3

Descargo de responsabilidad

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