

State of animal DNA barcoding in the Philippines: A review of COI sequencing of Philippine native fauna

Ian Kendrick C. Fontanilla^{1,4}, Andrew F. Torres^{1*},
Josephine Angela DG. Cañasa², Sandra L. Yap², and Perry S. Ong^{1,3}

¹DNA Barcoding Laboratory, Institute of Biology, College of Science, University of the Philippines, Diliman, Quezon City, Philippines, 1101

²Molecular Ecology and Systematics Laboratory, Institute of Biology, College of Science, University of the Philippines, Diliman, Quezon City, Philippines, 1101

³Biodiversity Research Laboratory, Institute of Biology, College of Science, University of the Philippines, Diliman, Quezon City, Philippines, 1101

⁴Natural Sciences Research Institute, College of Science, University of the Philippines, Diliman, Quezon City, Philippines, 1101

A 648-bp fragment of the cytochrome c oxidase subunit I gene (COI), the gold standard in animal DNA barcoding, is used as a tool in the identification of species as well as the development of proper conservation strategies and management.

This paper reviews the current state of DNA barcoding of native fauna in the Philippines through data mining of COI profiles of Philippine specimens in GenBank. Two thousand six hundred forty six sequences, representing 715 species from 216 families and 8 animal phyla, were obtained. This is a miniscule sample considering the megadiversity status of the Philippines, which has a reported species assemblage of more than 50,000 species. Based on the review, two patterns emerged: (1) DNA barcoding of Philippine native fauna focused on insects, gastropods, bony fish, and birds; and (2) nearly 60% of Philippine native species barcoded were generated by laboratories in Canada and the USA. These findings emphasize the need for a more extensive

and comprehensive DNA barcoding coverage of Philippine species, commensurate to its megadiversity status, as well as contribute to the representation of Philippine diversity in the global baseline. This can partly be addressed by the active participation of more Philippine institutions and researchers in DNA barcoding efforts.

INTRODUCTION

Taxonomy is an integral part of any biological study. Scientific studies involving a taxon must have an accurate identification of that taxon. In the past, morphology alone sometimes fails as an effective identifier of species (Packer et al. 2009). In cases of morphologically similar species, or where the specimens are derived from larval or juvenile life stages, the usefulness of traditional methods of comparative morphology could be limited (Gossner and Hausmann 2009). Furthermore, traditional taxonomy is heavily dependent on specialists whose knowledge is usually lost when they retire, thus there is a need for a novel scheme that would preserve taxonomic information and knowledge and make these more accessible (Tautz et al. 2003).

KEYWORDS

DNA barcoding, Philippines, animals, COI, Genbank, genetics

*Corresponding author

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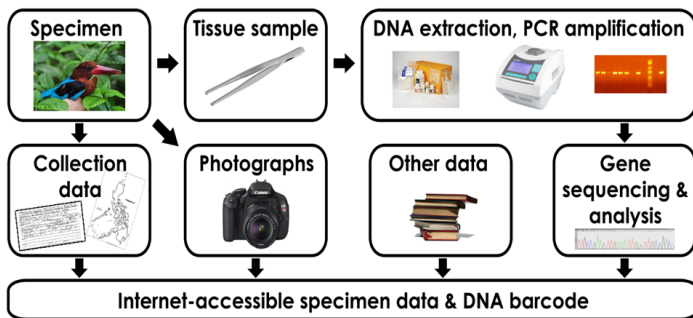


Figure 1. The “barcode production pipeline.” The creation of a barcode profile starts with the collection of a tissue sample from a specimen and continues with the collection of key collection and specimen details and ends with a COI sequence generated through DNA extraction, PCR amplification, gene sequencing, and analysis, tagged with the specimen or tissue sample preserved in a depository. Image adapted from IBOL (2013).

Tautz et al. (2003) proposed a DNA taxonomy system that will provide a scaffold for the accumulated taxonomic knowledge and serve as a convenient tool for species identification and description. Genetic sequences were utilized previously for taxonomic purposes, but these were mostly used only as a supplementary measure. Tautz et al. (2003) suggested a central role for DNA in taxonomy, which could eliminate subjective assessments and serve as a significant step towards a more accessible and universal platform for the deposition and retrieval of taxonomic information.

One of the most widely used markers for population genetic and phylogeographic studies across the animal kingdom is the cytochrome c oxidase subunit I gene (*cox1* or COI, Avise 1994). COI encodes for the cytochrome c oxidase I (COX1), one of the three mitochondrial DNA encoded subunits of the respiratory Complex IV, which is the third and final enzyme of the electron transport chain of mitochondrial oxidative phosphorylation. Its utility increased further when Hebert et al. (2003a, 2003b) showed that a 5' 648-bp fragment of the COI gene (Folmer region) could be an efficient identification tool for many metazoan species. The diversity in the amino acid sequences coded by the gene was sufficient to place species reliably into higher taxonomic classifications (from phyla to orders). In addition, they observed that diversity in nucleotide sequences of the same gene region allowed for the discrimination of closely related lepidopteran and avian species (Hebert et al. 2003a, 2004). Therefore, it was proposed that a DNA barcoding system for most, if not all, animal life could be based upon sequence diversity in COI.

DNA barcoding is based on a barcode profile created from the sequenced COI gene of the specimen, which would then be tagged together with the specimen as its barcode description (Figure 1). Identification is done by matching the barcode profile with those found in the database (Hebert and Gregory 2005, Hajibabaei et al. 2007). One of the most frequently used tools for

computing sequence similarity is the Basic Local Alignment Search Tool, or BLAST, found in the National Center for Biotechnology Information (NCBI) website. After submitting a query, the sequence will be fed to the algorithm on the BLAST server and locally aligned to similar sequences in the database (Madden 2002). This alignment will be translated into scores that signify similarity of sequences. A specimen is identified if its sequence matches one in the barcode library. Otherwise, the sequence could either be a novel barcode sequence for a given species, usually as a new haplotype or geographical variant, or it belonged to an unknown species.

In May 2004, the Consortium for the Barcode of Life (CBOL) was established with many natural history museums and herbaria, research organizations and private partners as members. It is a consortium devoted to developing DNA barcoding as a global standard for the identification of biological species (CBOL 2013). Subsequently, DNA barcoding became a global enterprise that led to the advancement of the DNA barcoding paradigm (Taylor and Harris 2012). While CBOL's initial aim was to establish DNA barcoding as a gold standard in the identification of specimens, its application had greater implications (Hebert et al. 2003a, 2003b, 2004; Hebert and Gregory 2005; Kvist 2013). Through DNA barcoding projects, new insights on ecology and species biology have already emerged (e.g., wild animal diets, host-parasite relationships), benefitting agriculture and aquaculture, and debates on the species concept have been re-opened, enriching the literature on evolution and systematics (Frézal and Leblois 2008, Valentini et al. 2009). DNA barcoding is currently being used to identify invasive species, which improves biosecurity (Armstrong and Ball 2005), monitor fish being sold in supermarkets (Rasmussen et al. 2009), and advance the discussion on conservation and management (Rubinoff 2006, Francis et al. 2010).

The Philippines is one of the 17 megadiversity countries in the world, being home to more than 1,130 terrestrial vertebrate species, more than 2,000 species of fish, nearly 500 coral species, thousands more of other invertebrates, and 10,000 to 13,000 plant species (Heaney and Mittermeier 1998, Ong 2002, Ong et al. 2002). With high levels of endemism and rapid rates of destruction of natural habitats, the country was also identified as a top global priority for conservation action for both terrestrial and marine ecosystems (Myers et al. 2000, Roberts et al. 2002). The availability of a DNA barcode database for Philippine species can provide information regarding the phylogenetic relationships of closely related taxa as well as a clear picture of the genetic structure of species populations, which is necessary for their proper management. As a result to an invitation from CBOL, the Philippines attended a meeting in Taiwan to discuss how barcoding could be done in the Philippines. With support from CBOL, a national conference was organized in April 2008 wherein plans were discussed on how the work could be divided among the academic and research institutions that attended. The Institute of Biology, University of the Philippines Diliman then initiated the DNA Barcoding of Life - Philippine Network (DoLPhiN) in

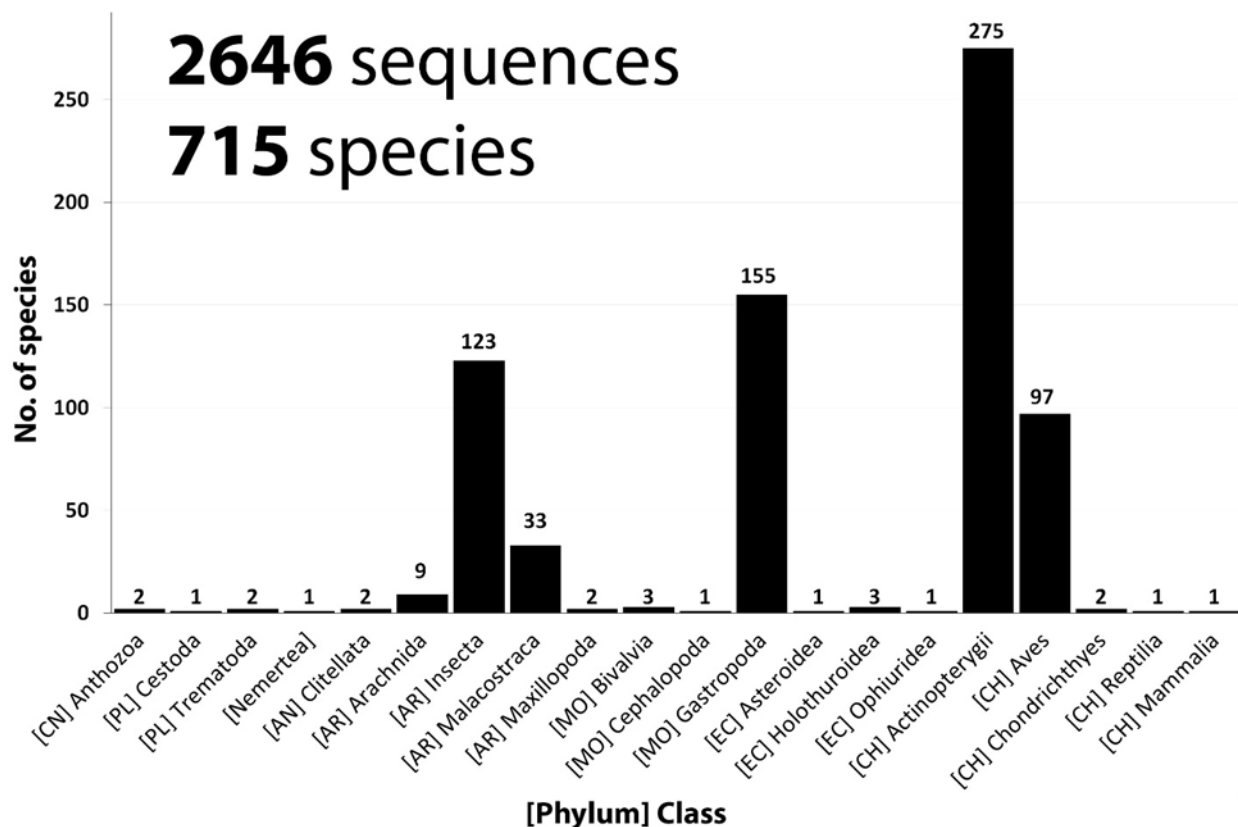


Figure 2. A total of 2,646 sequences that met the search criteria correspond to 715 species belonging to 216 families found within 20 classes under 8 zoological phyla ([CN] Cnidaria; [PL] Platyhelminthes; Nemertea; [AN] Annelida; [AR] Arthropoda; [MO] Mollusca; [EC] Echinodermata; [CH] Chordata). Chordates, molluscs, and arthropods represent most of the species documented

2008 (Luczon et al. 2013) in response to this need. DoIPhN is an ongoing research program that aims to DNA barcode as many Philippine species as possible, with primary focus on threatened, endemic and economically important species through a collaborative effort with local institutions to advance DNA barcoding as a tool of biodiversity research and conservation.

Other Philippine institutions followed suit and developed various COI sequence databases and tissue depositories for different taxa. However, no study has documented the progress of DNA barcoding efforts in the Philippines.

This paper aims to assess the state of DNA barcoding of Philippine animal species through data mining of publicly available COI sequences uploaded from the worldwide web. The search for COI sequences was not limited to those that were produced solely for barcoding purposes, or to sequences that were generated by local studies. As DNA barcoding is a global effort, COI sequences produced by foreign studies, as well as collaborations, were included in the assessment. The Barcode of Life Data System (BOLD) is an informatics workbench aiding the acquisition, storage, analysis and publication of DNA barcode records (Ratnasingham and Hebert 2007). While BOLD combines a barcode repository, analytical tools, a species identification tool, and connectivity for external web developers and

bioinformaticians, not all the sequences and associated specimen data are publicly available (Millar et al. 2011). Reflecting its role as a barcode workbench, BOLD allows users to keep certain data elements private and to determine the timing of full data release (Ratnasingham and Hebert 2007). As soon as the sequence and key specimen data are allowed and ready to be publicly released, a copy of these migrate to the NCBI database or to its sister genomic repositories. Accordingly, all data for this review were collected from NCBI exclusively.

METHODOLOGY

A search for all COI sequences of animal specimens collected from the Philippines was conducted via the nucleotide search function in the NCBI website (<http://www.ncbi.nlm.nih.gov/>), also known as GenBank, using the keywords “(philippine* COI NOT unverified)”. The use of the asterisk ensured that any sequence profile submitted in GenBank that contains “Philippine,” “Philippines,” “*philippinensis*,” etc. will be included in the search results. Inclusion of the phrase “NOT unverified” guaranteed that all the sequences that did not go through the verification process done by GenBank with the submitter of the sequence were excluded from the search.

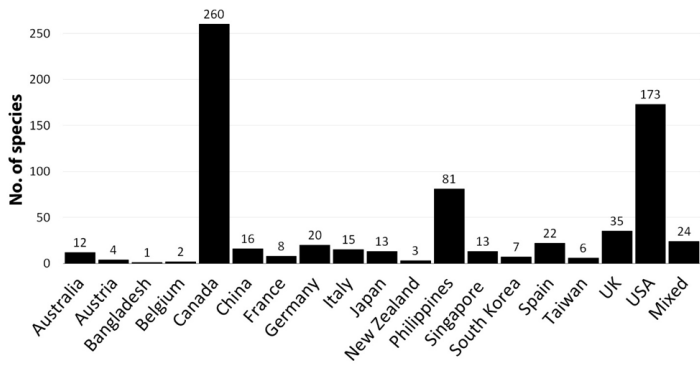


Figure 3. Eighteen countries, including the Philippines, have contributed to DNA barcoding of Philippine animal taxa.

Pertinent information for each sequence profile, such as its accession number, the organism's phylum, class, family, and species name, the specimen's collection site, name and country of the institution that submitted the sequence, year of submission, the author/s, title of the project, and journal where the sequence was used or analyzed (if published) were collected from all the entries. In the process, entries of non-animal specimens, or of samples that did not come from the Philippines, were discarded. Further, since this review aimed to assess the state of Philippine DNA barcoding at the species level, entries that could be identified up to the genus only were likewise disregarded. The endemism of each qualified species was determined as well by comparing it with existing validated checklists for the four major wildlife taxa such as those for the amphibians through Threatened Amphibians of the World (<http://www.amphibians.org/publications/threatened-amphibians-of-the-world/>), reptiles through the list provided by the Biodiversity Management Bureau - Department of Environment and Natural Resources (BMB-DENR; http://bmb.gov.ph/index.php?option=com_docman&task=doc_download&gid=686&Itemid=156), those for birds from the International Ornithological Committee World Bird List version 3.5 (<http://www.worldbirdnames.org/ioc-lists/master-list/>), and those for mammals from Heaney and Mittermeier (1998) and Heaney et al. (2010). Lastly, each author's affiliation was inspected in order to classify whether each contributing project was foreign, Filipino, or a collaboration between foreign and Filipino institutes. Unless done in the Philippines, unpublished works' authorship was classified as unknown.

RESULTS AND DISCUSSION

As of 14 July 2013, the initial GenBank query returned 3,203 COI profiles. Eliminating non-specific entries and entries with non-animal and non-Philippine specimens reduced the total to 2,646 sequences that corresponded to 715 species (Figure 2). The acquired sequences belong to 216 families from 20 classes under eight phyla, namely Cnidaria, Platyhelminthes, Nemertea, Annelida, Arthropoda, Mollusca, Echinodermata, and Chordata.

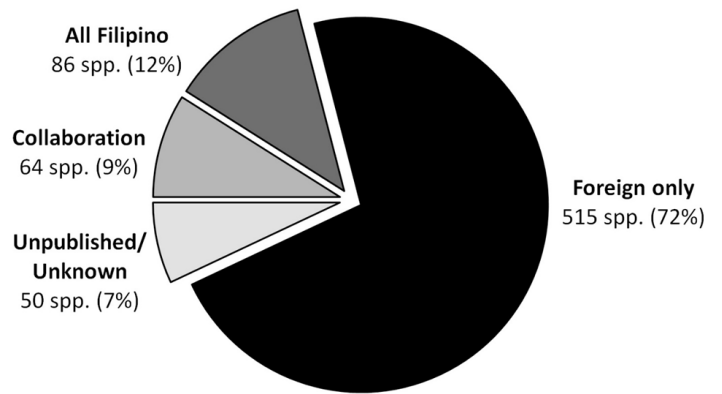


Figure 4. Only about 1 out of 5 Philippine species barcoded could be attributed to studies that include a Filipino institution.

Four classes that had the most number of species with COI sequenced included the Actinopterygii (ray-finned bony fishes) and Aves (birds) of phylum Chordata, Gastropoda (snails and slugs) of phylum Mollusca, and Hexapoda (insects) of phylum Arthropoda, which between themselves contain 91% of the total species with COI sequences. Aside from the arthropod classes Malacostraca (crabs, shrimps, lobsters) and Arachnida (spiders, mites, harvestmen) with 33 and nine species, respectively, the rest of the classes obtained from the filtered search each contained at most three barcoded species.

This uneven distribution of barcode sequences is consistent with the taxonomic barcode-coverage analysis conducted by Kvist (2013). In his study, he compared the taxonomic coverage of the two largest barcode repositories (BOLD and NCBI) to the current estimation of recognized biodiversity at the species level. His results showed that only 15.13% of the recognized biodiversity on Earth (235,013 unique taxon labels as compared to 1,553,399 recognized species) were covered by DNA barcoding and that a taxonomic bias existed for a few phyla that include chordates, arthropods, and mollusks. Furthermore, he found the majority of taxa underrepresented in the barcoding databases. The 715 animal species accounted for in this assessment represent a minuscule amount of the biodiversity assemblage in the Philippines, estimated to be more than 50,000 species (Ong et al. 2002). Of the 715 barcoded native species listed in Appendix A, only 109 species (composed mostly of birds and insects) are presumed to be endemic. This is a clear underrepresentation of the Philippines' unique species assemblage. Thus, the DNA barcoding community faces a great challenge to sequence the DNA barcodes of this vast biodiversity.

Aside from the Philippines, 17 other countries contributed to sequencing Philippine animal species (Figure 3). Combining works from Canada and the United States of America would account for 433 species with COI sequences (about 60% of the total), surpassing submissions from the Philippines, which ranks only third with 81 species (11%). Other countries like Australia,

Table 1. Philippine institutes that have contributed to barcoding Philippine native animal species.

Institute	No. of species	PHL/COL	Year	PHL Correspondent
Department of Agriculture - Philippine Rice Research Institute, Crop Protection Division	7	COL	2005	Ravindra C. Joshi
De La Salle University Manila, Biology Department	7	COL	2011	Hendrik Freitag
National Museum of the Philippines, Zoology Division, Herpetology Section	7	COL	2012	Perry A.C. Buenavente, Arvin C. Diesmos
Research Institute for Tropical Medicine	3	COL	2005	E.P. Torres
University of the Philippines - Diliman, College of Science, Institute of Biology	83	PHL	2008	Ian Kendrick C. Fontanilla, Jonas P. Quilang, Perry S. Ong
University of the Philippines - Diliman, College of Science, Marine Science Institute	39	COL	2009	April B. Cabang, Gisela P. Concepcion
University of the Philippines - Los Baños, College of Agriculture, Animal and Dairy Sciences Cluster	1	PHL	2012	Orville L. Bondoc
University of the Philippines - Los Baños, College of Arts and Sciences - Institute of Biological Sciences	1	PHL	2013	Michael Leonardo C. Delomen
University of the Philippines - Manila, College of Public Health, Department of Parasitology	1	COL	1993	Wilfred U. Tiu
University of the Philippines - Visayas, College of Fisheries and Ocean Sciences	1	COL	2011	Minerva Olympia

(PHL = all-Filipino study; COL = collaboration)

Austria, Bangladesh, Belgium, China (including Hong Kong), France, Germany, Italy, Japan, New Zealand, Singapore, South Korea, Spain, Taiwan, and the United Kingdom have contributed to COI sequencing which range from one to 35 species each. Several species have COI contributions from more than one country (last column, Figure 3).

One of the reasons for this dominant contribution from Canada and the USA is that the International Barcode of Life (iBOL) and CBOL, respectively, are based in these countries, which also happen to have a number of well-sustained natural history museums that contain a wide array of animal specimens. Thus, these countries are expected to have undertaken the bulk of barcoding efforts of the world's species as well as those of the Philippines. However, for these countries to have processed two to three times more species than their samples' country of origin is an indication of the need to increase the level of local barcoding efforts, especially in a country with high levels of endemism and high risks of loss of its biodiversity. Based on the authorship (Filipino, foreign, or collaboration) of the COI sequenced or analyzed, only 12% were contributed by Philippine institutions while collaboration of Philippine-based laboratories with institutions overseas produced 64 species barcoded or 9% of the total (Figure 4). Unpublished works done outside the Philippines comprise 7% of the total species sequenced. This means that only one out of five Philippine species barcoded have Filipino involvement. While contributions for the expansion of the Philippine COI database from international groups and organizations are most welcome, there should be greater involvement of local institutions in the huge DNA barcoding efforts.

Ten local institutes were found to be involved in producing the collected COI sequences (Table 1). Producing a significant number of the animal DNA barcodes are the Institute of Biology and the Marine Science Institute, both from the University of the Philippines in Diliman, Quezon City. Five other institutions are universities, one is a museum, and the remaining two are government agricultural and medical research institutes.

The functionality of standard animal DNA barcodes (i.e., the identification of unknown specimens by comparing it with COI sequences of known species) is contingent on working barcode databases with sufficient taxonomic coverage (Kvist 2013). Unless the databases have an adequate, balanced, close representation of all taxa, DNA barcoding would have little utility as unknown individuals could not be accurately identified if the taxonomic group it belongs to is not comprehensively sampled. Given the limited representation of the COI sequences of Philippine biodiversity in global barcode databases, local institutions capable of increasing the number of COI sequences of Philippines species should be encouraged. In addition, to efficiently monitor the progress of the barcoding efforts of the country, the authors suggest the creation of a silo or database for COI sequences generated in the Philippines. A central database would be most helpful in improving the management and coordination of collaborations among different participating institutions.

With the current advances in molecular biology research as well as the importance of molecular taxonomic data in under-

standing biodiversity, the Philippines in particular and the world in general cannot afford not to invest in completing the COI sequencing of this unique biodiversity assemblage as soon as possible, if this global patrimony is to be conserved properly. Furthermore, the dissemination of knowledge will eventually reinforce the importance of DNA barcoding as a tool of biodiversity research and of conservation.

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CONFLICTS OF INTEREST

The authors certify that there is no conflict of interest with any financial organization regarding the material discussed in the manuscript.

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Appendix A. List of barcoded species and their corresponding institutions.

Species		Corresponding Institution	Philippine Collaborating Institution
ANNELIDA - Clitellata			
<i>Haemadipsa cochiniiana</i>	Resident	Marine Biology Research Division, Scripps Institution of Oceanography	
<i>Phytobdella meyeri</i>	Resident	Marine Biology Research Division, Scripps Institution of Oceanography	
ARTHROPODA - Arachnida			
<i>Ethobunus brevis</i>	Resident	Organismic and Evolutionary Biology, Harvard University	Herpetology Section, Zoology Division, National Museum of the Philippines, Manila
<i>Ethobunus tarsalis</i>	Resident	Organismic and Evolutionary Biology, Harvard University	Herpetology Section, Zoology Division, National Museum of the Philippines, Manila
<i>Nephila antipodiana</i>	Resident	EEB, University of Kansas	
<i>Pachyliscus spinatus</i>	Resident	Organismic and Evolutionary Biology, Harvard University	Herpetology Section, Zoology Division, National Museum of the Philippines, Manila
<i>Raoiella indica</i>	Resident	Entomology, University of Arkansas	
<i>Zalmoxis bendis</i>	Resident	Organismic and Evolutionary Biology, Harvard University	Herpetology Section, Zoology Division, National Museum of the Philippines, Manila
<i>Zalmoxis cuspanalis</i>	Resident	Organismic and Evolutionary Biology, Harvard University	Herpetology Section, Zoology Division, National Museum of the Philippines, Manila
<i>Zalmoxis gebeleizis</i>	Endemic	Organismic and Evolutionary Biology, Harvard University	Herpetology Section, Zoology Division, National Museum of the Philippines, Manila
<i>Zalmoxis mitobatipes</i>	Endemic	Organismic and Evolutionary Biology, Harvard University	Herpetology Section, Zoology Division, National Museum of the Philippines, Manila
<i>Zalmoxis pygmaeus</i>	Resident	Organismic and Evolutionary Biology, Harvard University	Herpetology Section, Zoology Division, National Museum of the Philippines, Manila
ARTHROPODA - Insecta			
<i>Acosmeryx socrates</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Agape chloropyga</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Aleueodicus dispersus</i>	Resident	Entomology, Patuakhali Science and Technology University	
<i>Ambulyx bakeri</i>	Endemic	Biodiversity Institute of Ontario, University of Guelph	
<i>Ambulyx immaculata</i>	Endemic	Biodiversity Institute of Ontario, University of Guelph	
<i>Ambulyx johnsoni</i>	Endemic	Biodiversity Institute of Ontario, University of Guelph	
<i>Ambulyx staudingeri</i>	Endemic	Biodiversity Institute of Ontario, University of Guelph	
<i>Ambulyx wilemani</i>	Endemic	Biodiversity Institute of Ontario, University of Guelph	
<i>Ancyronyx helgeschneideri</i>	Endemic	Museum fuer Tierkunde, Senckenberg Naturhistorische Sammlungen Dresden	Biology Department, DLSU, Manila
<i>Ancyronyx minerva</i>	Endemic	Museum fuer Tierkunde, Senckenberg Naturhistorische Sammlungen Dresden	Biology Department, DLSU, Manila
<i>Ancyronyx montanus</i>	Endemic	Museum fuer Tierkunde, Senckenberg Naturhistorische Sammlungen Dresden	Biology Department, DLSU, Manila
<i>Ancyronyx patrolus</i>	Endemic	Museum fuer Tierkunde, Senckenberg Naturhistorische Sammlungen Dresden	Biology Department, DLSU, Manila
<i>Ancyronyx procerus</i>	Resident	Museum fuer Tierkunde, Senckenberg Naturhistorische Sammlungen Dresden	Biology Department, DLSU, Manila

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Species		Corresponding Institution	Philippine Collaborating Institution
<i>Ancyronyx pseudopatrolus</i>	Endemic	Museum fuer Tierkunde, Senckenberg Naturhistorische Sammlungen Dresden	Biology Department, DLSU, Manila
<i>Ancyronyx punkti</i>	Endemic	Museum fuer Tierkunde, Senckenberg Naturhistorische Sammlungen Dresden	Biology Department, DLSU, Manila
<i>Ancyronyx schillhammeri</i>	Endemic	Museum fuer Tierkunde, Senckenberg Naturhistorische Sammlungen Dresden	
<i>Anopheles dispar</i>	Resident	Australian Centre for International & Tropical Health & Nutrition, The University of Queensland & Queensland Institute of Medical Research	Research Institute for Tropical Medicine
<i>Anopheles filipinae</i>	Endemic	Australian Centre for International & Tropical Health & Nutrition, The University of Queensland & Queensland Institute of Medical Research	Research Institute for Tropical Medicine
<i>Anopheles flavirostris</i>	Resident	Australian Centre for International & Tropical Health & Nutrition, The University of Queensland & Queensland Institute of Medical Research	Research Institute for Tropical Medicine, Alabang, Muntinlupa
<i>Antheraea larissa philippirissa</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Antheraea paniki</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Antheraea rosieri imeldae</i>	Endemic	Biodiversity Institute of Ontario, University of Guelph	
<i>Antheraea schroederi</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Antheraea semperi noeli</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Apis andreniformis</i>	Resident	Center for Ecological Research, Kyoto University	
<i>Asota egens confinis</i>	Endemic	Biodiversity Institute of Ontario, University of Guelph	
<i>Asota egens reducta</i>	Endemic	Biodiversity Institute of Ontario, University of Guelph	
<i>Asota heliconia philippina</i>	Endemic	Biodiversity Institute of Ontario, University of Guelph	
<i>Asota heliconia timorana</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Asota isthmia</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Asota javana flaviventris</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Asota javana javana</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Asota orbona discoidalis</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Asota paphos</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Asota plaginota stigmatica</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Asota plana plana</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Asota trinacria</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Aspidiotus excisus</i>	Resident	Biological Resource Center, KRIBB	
<i>Aulacaspis tubercularis</i>	Resident	Biological Resource Center, KRIBB	
<i>Bactrocera carambolae</i>	Resident	School of Earth, Environmental and Biological Sciences, Queensland University of Technology	
<i>Bactrocera cognata</i>	Resident	Molecular Diagnostics, Bio-Protection Research Centre, Lincoln University	
<i>Bactrocera cucurbitae</i>	Resident	African Zoology - Section Entomology, Royal Museum for Central Africa	
<i>Bactrocera dorsalis</i>	Resident	School of Earth, Environmental and Biological Sciences, Queensland University of Technology	

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Species		Corresponding Institution	Philippine Collaborating Institution
<i>Bactrocera makilingensis</i>	Endemic	Molecular Diagnostics, Bio-Protection Research Centre, Lincoln University	
<i>Bactrocera occipitalis</i>	Resident	African Zoology - Section Entomology, Royal Museum for Central Africa; Shenzhen Entry-Exit Inspection & Quarantine Bureau; Molecular Diagnostics, Bio-Protection Research Centre, Lincoln University	
<i>Bactrocera philippinensis</i>	Resident	Graduate School of Agriculture, Hajime Ono Kyoto University; Shenzhen Entry-Exit Inspection & Quarantine Bureau; Molecular Diagnostics, Bio-Protection Research Centre, Lincoln University; Genetics and Molecular Biology Division, Institute of Biological Sciences, College of Arts and Sciences, University of the Philippines Los Banos	Genetics and Molecular Biology Division, Institute of Biological Sciences, College of Arts and Sciences, UP Los Banos
<i>Bactrocera synnephes</i>	Resident	African Zoology - Section Entomology, Royal Museum for Central Africa	
<i>Bactrocera umbrosa</i>	Resident	Molecular Diagnostics, Bio-Protection Research Centre, Lincoln University; Masahiko Muraji, National Institute of Agrobiological Sciences	
<i>Brontispa longissima</i>	Resident	Shun-Ichiro Takano Yokohama Plant Protection Station	
<i>Callambulyx amanda</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Callosobruchus pulcher</i>	Resident	Faculty of Agriculture, Kyushu University, Institute of Biological Control	
<i>Cechenena transpacific</i>	Endemic	Biodiversity Institute of Ontario, University of Guelph	
<i>Cephonodes banksi</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Cephonodes picus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Chromatomyia horticola</i>	Resident	Systematic Entomology Laboratory, USDA-ARS-PSI	Crop Protection Division, Department of Agriculture-Philippine Rice Research Institute
<i>Clanis stenosema</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Clanis surigaensis</i>	Endemic	Biodiversity Institute of Ontario, University of Guelph	
<i>Cricula luzonica kareli</i>	Endemic	Biodiversity Institute of Ontario, University of Guelph	
<i>Cricula palawanica</i>	Endemic	Biodiversity Institute of Ontario, University of Guelph	
<i>Cylindera excisa</i>	Resident	Department of Zoology, Graduate School of Science, Kyoto University	
<i>Cypa claggi</i>	Endemic	Biodiversity Institute of Ontario, University of Guelph	
<i>Cypa luzonica</i>	Endemic	Biodiversity Institute of Ontario, University of Guelph	
<i>Dahira rebecca</i>	Endemic	Biodiversity Institute of Ontario, University of Guelph	
<i>Daphnis vriesi</i>	Endemic	Biodiversity Institute of Ontario, University of Guelph	
<i>Daphnusa ocellaris</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Daphnusa philippinensis</i>	Endemic	Biodiversity Institute of Ontario, University of Guelph	
<i>Degmaptera cadioui</i>	Endemic	Biodiversity Institute of Ontario, University of Guelph	
<i>Dolbina mindanaensis</i>	Endemic	Biodiversity Institute of Ontario, University of Guelph	
<i>Dysmicoccus brevipes</i>	Resident	Biological Resource Center, KRIBB	
<i>Dysmicoccus neobrevipes</i>	Resident	Biological Resource Center, KRIBB; Shenzhen Entry-Exit Inspection and Quarantine Bureau of P. R. China	

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Species		Corresponding Institution	Philippine Collaborating Institution
<i>Elibia linigera</i>	Endemic	Biodiversity Institute of Ontario, University of Guelph	
<i>Eupanacra cadioui</i>	Endemic	Biodiversity Institute of Ontario, University of Guelph	
<i>Eupanacra elegantulus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Eupanacra malayana</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Eupanacra mindanaensis</i>	Endemic	Biodiversity Institute of Ontario, University of Guelph	
<i>Euplocia membliaria</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Gnathothlibus erotus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Hippotion echeclus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Hippotion velox</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Homona salaconis</i>	Resident	National Museum of Natural History, Smithsonian Institution	
<i>Lampides boeticus</i>	Resident	Department of Biological Sciences, National University of Singapore	
<i>Lepidosaphes laterochitinoso</i>	Resident	Biological Resource Center, KRIBB	
<i>Leptopilina victorica</i>	Resident	Biology Department, Emory University	
<i>Liriomyza brassicae</i>	Resident	Systematic Entomology Laboratory, USDA-ARS-PSI	Crop Protection Division, Department of Agriculture-Philippine Rice Research Institute
<i>Liriomyza chinensis</i>	Resident	Systematic Entomology Laboratory, USDA-ARS-PSI	Crop Protection Division, Department of Agriculture-Philippine Rice Research Institute
<i>Liriomyza huidobrensis</i>	Resident	Systematic Entomology Laboratory, USDA-ARS-PSI	Crop Protection Division, Department of Agriculture-Philippine Rice Research Institute
<i>Liriomyza sativae</i>	Resident	Systematic Entomology Laboratory, USDA-ARS-PSI	Crop Protection Division, Department of Agriculture-Philippine Rice Research Institute
<i>Liriomyza trifolii</i>	Resident	Systematic Entomology Laboratory, USDA-ARS-PSI	Crop Protection Division, Department of Agriculture-Philippine Rice Research Institute
<i>Loepa nigropupillata</i>	Endemic	Biodiversity Institute of Ontario, University of Guelph	
<i>Lymantria naessigi</i>	Resident	Forest Sciences, University of British Columbia	
<i>Lymantria rhabdota</i>	Resident	Forest Sciences, University of British Columbia	
<i>Lymantria semperi</i>	Resident	Forest Sciences, University of British Columbia	
<i>Macroglossum arimasi</i>	Endemic	Biodiversity Institute of Ontario, University of Guelph	
<i>Macroglossum insipida</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Melanaspis bromiliae</i>	Resident	Biological Resource Center, KRIBB	
<i>Moduza pintuyana</i>	Resident	Ecology and Evolutionary Biology, Cornell University	
<i>Neogurelca hyas</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Nicrophorus apo</i>	Endemic	Biology, University of Calgary	
<i>Ophiomyia phaseoli</i>	Resident	Systematic Entomology Laboratory	Crop Protection Division, Department of Agriculture-Philippine Rice Research Institute
<i>Papilio hermeli</i>	Endemic	Integrative Biology, University of Guelph; Centre de Biologie pour la Gestion des Populations, UMR1062, Institut National de la Recherche Agronomique, Campus international de Baillarguet	
<i>Papilio hipponous</i>	Endemic	Dept. of Biological Sciences, University of Alberta	

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Species		Corresponding Institution	Philippine Collaborating Institution
<i>Papilio palinurus daedalus</i>	Endemic	Centre de Biologie pour la Gestion des Populations, UMR1062, Institut National de la Recherche Agronomique, Campus international de Baillarguet	
<i>Papilio rumanzovia</i>	Resident	Dept. of Biological Sciences, University of Alberta	
<i>Pediculus humanus capitis</i>	Resident	Florida Museum of Natural History, University of Florida	
<i>Photoscotosia cupha</i>	Resident	Zoologisches Forschungsmuseum Alexander Koenig	
<i>Planococcus citri</i>	Resident	Biological Resource Center, KRIBB	
<i>Planococcus lilacinus</i>	Resident	Biological Resource Center, KRIBB	
<i>Poliana albescens</i>	Endemic	Biodiversity Institute of Ontario, University of Guelph	
<i>Pseudoganisa currani</i>	Endemic	Entomologie II, Forschungsinstitut Senckenberg	
<i>Psithyriscia crassinervis</i>	Resident	Ecology and Evolutionary Biology, University of Connecticut	
<i>Psithyriscia nodinervis</i>	Resident	Ecology and Evolutionary Biology, University of Connecticut	
<i>Sataspes cerberus</i>	Endemic	Biodiversity Institute of Ontario, University of Guelph	
<i>Sataspes leyteana</i>	Endemic	Biodiversity Institute of Ontario, University of Guelph	
<i>Sataspes negrosiana</i>	Endemic	Biodiversity Institute of Ontario, University of Guelph	
<i>Tetramorium cynicum</i>	Resident	University of Natural Resources and Applied Life Sciences Vienna	
<i>Tetramorium insolens</i>	Resident	University of Natural Resources and Applied Life Sciences Vienna	
<i>Tetramorium manobo</i>	Endemic	University of Natural Resources and Applied Life Sciences Vienna	
<i>Tetramorium pacificum</i>	Resident	University of Natural Resources and Applied Life Sciences Vienna	
<i>Theretra alecto</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Theretra insularis</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Theretra manilae</i>	Endemic	Biodiversity Institute of Ontario, University of Guelph	
<i>Theretra rhesus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Theretra sugii</i>	Endemic	Biodiversity Institute of Ontario, University of Guelph	
ARTHROPODA - Malacostraca			
<i>Allogalthea elegans</i>	Resident	Biodiversidad y Biología Evolutiva, Museo Nacional Ciencias Naturales	
<i>Atergatis laevigatus</i>	Resident	Biological Sciences, National University of Singapore	
<i>Atypopenaeus dearmatus</i>	Resident	Biology, The Chinese University of Hong Kong	
<i>Bathyarctus rubens</i>	Resident	Institute of Marine Biology, National Taiwan Ocean University	
<i>Calappa gallus</i>	Resident	Biological Sciences, National University of Singapore	
<i>Cardina serratiostris</i>	Resident	Centre for Riverine Landscapes, Faculty of Environmental Sciences, Griffith University	

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Species		Corresponding Institution	Philippine Collaborating Institution
<i>Epistocavea mururoa</i>	Endemic	Biological Sciences, National University of Singapore	
<i>Eurozius camacho</i>	Endemic	Biological Sciences, National University of Singapore	
<i>Fenneropenaeus merguensis</i>	Resident	Biology, The Chinese University of Hong Kong	
<i>Galearctus timidus</i>	Resident	Institute of Marine Biology, National Taiwan Ocean University	
<i>Heterocarpus chani</i>	Resident	Institute of Marine Biology, National Taiwan Ocean University	
<i>Heterocarpus gibbosus</i>	Resident	Institute of Marine Biology, National Taiwan Ocean University	
<i>Linuparus trigonus</i>	Resident	Department of Science and Environmental Studies, The Hong Kong Institute of Education	
<i>Macrobrachium australe</i>	Resident	National Tsing Hua University, Department of Life Science	
<i>Macrobrachium equidens</i>	Resident	National Tsing Hua University, Department of Life Science	
<i>Macrobrachium esculentum</i>	Resident	National Tsing Hua University, Department of Life Science	
<i>Macrobrachium lar</i>	Resident	National Tsing Hua University, Department of Life Science	
<i>Macrobrachium latidactylus</i>	Resident	National Tsing Hua University, Department of Life Science	
<i>Macrobrachium latimanus</i>	Resident	National Tsing Hua University, Department of Life Science	
<i>Macrobrachium placidulum</i>	Resident	National Tsing Hua University, Department of Life Science	
<i>Maja kominatoensis</i>	Resident	Departamento de Bioquímica, Genética e Inmunología, Universidad de Vigo	
<i>Metanephrops sinensis</i>	Resident	Biology, The Chinese University of Hong Kong	
<i>Metanephrops thomsoni</i>	Endemic	Biology, The Chinese University of Hong Kong	
<i>Panulirus longipes</i>	Resident	Invertebrate Research Lab, Marine Science Institute, UP Diliman	The Marine Science Institute, UP Diliman, QC
<i>Paramunida setigera</i>	Resident	Biodiversidad y Biología Evolutiva, Museo Nacional de Ciencias Naturales	
<i>Paramunida tricarinata</i>	Resident	Biodiversidad y Biología Evolutiva, Museo Nacional de Ciencias Naturales	
<i>Philippidorippe philippinensis</i>	Resident	Department of Biology, The Chinese University of Hong Kong	
<i>Raymunida elegantissima</i>	Resident	Biodiversidad y Biología Evolutiva, Museo Nacional de Ciencias Naturales	
<i>Remiarctus bertholdii</i>	Resident	Institute of Marine Biology, National Taiwan Ocean University	
<i>Scopimera philippinensis</i>	Endemic	Ht Shih National Chung Hsing University, Department of Life Science	
<i>Scylla tranquebarica</i>	Resident	Motoya Tamaki Seikai National Fisheries Research Institute, Ishigaki Tropical Station	

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Species		Corresponding Institution	Philippine Collaborating Institution
<i>Thenus orientalis</i>	Resident	Biodiversity and Geosciences, Queensland Museum	
<i>Uca jocelynae</i>	Resident	Hsi-Te Shih Department of Life Science, National Chung Hsing University	
Arthropoda - Maxillopoda			
<i>Heteralepas japonica</i>	Resident	Department of Biology, The Chinese University of Hong Kong	
<i>Octolasmis orthogonia</i>	Resident	Department of Biology, The Chinese University of Hong Kong	
Chordata - Actinopterygii			
<i>Abudefduf vaigiensis</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Acanthurus japonicus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Acanthurus lineatus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Acanthurus pyroferus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Acanthurus xanthopterus</i>	Resident	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC
<i>Ambassis buruensis</i>	Resident	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC
<i>Ambassis gymnocephalus</i>	Resident	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC
<i>Ambassis miops</i>	Resident	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC; Divine Word College of Legazpi, Legazpi City; AUF Center for Planning, Research, and Development, Angeles University Foundation, Angeles City
<i>Amblyeleotris guttata</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Amblyeleotris steinitzi</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Amblyeleotris sungami</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Amblyeleotris wheeleri</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Amblygobius decussatus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Amblygobius phalaena</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Amphilophus citrinellus</i>	Resident	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC; Divine Word College of Legazpi, Legazpi City; AUF Center for Planning, Research, and Development, Angeles University Foundation, Angeles City
<i>Amphiprion akallopisos</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Amphiprion chrysogaster</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Amphiprion melanopus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Amphiprion ocellaris</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Amphiprion perideraion</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Amphiprion polymnus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Amphiprion sebae</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Anabas testudineus</i>	Resident	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC
<i>Anampses meleagrides</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	

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Species		Corresponding Institution	Philippine Collaborating Institution
<i>Anampses neoguinaicus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Anguilla luzonensis</i>	Endemic	University of Tokyo, Ocean Research Institute; Jun Aoyama University of Tokyo, Ocean Research Institute	
<i>Anomalops katoptron</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Antennarius hispidus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Antennarius pictus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Antennatus nummifer</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Apogon hyalosoma</i>	Resident	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC; Divine Word College of Legazpi, Legazpi City; AUF Center for Planning, Research, and Development, Angeles University Foundation, Angeles City
<i>Apolemichthys trimaculatus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Arius dispar</i>	Resident	Institute of Biology, College of Science, University of the Philippines	Institute of Biology, UP Diliman, QC
<i>Arius manillensis</i>	Resident	Institute of Biology, College of Science, University of the Philippines	Institute of Biology, UP Diliman, QC
<i>Arothron nigropunctatus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Atherinomorus endrachtensis</i>	Resident	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC; Divine Word College of Legazpi, Legazpi City; AUF Center for Planning, Research, and Development, Angeles University Foundation, Angeles City
<i>Awaous melanocephalus</i>	Resident	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC
<i>Balistapus undulatus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Balistoides conspicillum</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Barbonymus gonionotus</i>	Resident	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC
<i>Bodianus anthioides</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Bodianus loxozonus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Calloplesiops altivelis</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Carangoides malabaricus</i>	Resident	Ichthyology, American Museum of Natural History	
<i>Caranx ignobilis</i>	Resident	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC; Divine Word College of Legazpi, Legazpi City; AUF Center for Planning, Research, and Development, Angeles University Foundation, Angeles City
<i>Caranx sexfasciatus</i>	Resident	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC; Divine Word College of Legazpi, Legazpi City; AUF Center for Planning, Research, and Development, Angeles University Foundation, Angeles City
<i>Carassius auratus</i>	Resident	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC; Divine Word College of Legazpi, Legazpi City; AUF Center for Planning, Research, and Development, Angeles University Foundation, Angeles City
<i>Centropyge argi</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Centropyge bicolor</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	

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Species		Corresponding Institution	Philippine Collaborating Institution
<i>Centropyge bispinosa</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Centropyge ferrugata</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Centropyge heraldi</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Centropyge nox</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Centropyge tibicen</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Centropyge vrolikii</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Cephalopholis fulva</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Cephalopholis leopardus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Cephalopholis urodeta</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Chaetodon argentatus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Chaetodon burgessi</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Chaetodon ephippium</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Chaetodon lunula</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Chaetodon ornatissimus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Chaetodon punctatofasciatus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Chaetodon ulietensis</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Chaetodon unimaculatus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Chaetodon vagabundus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Chaetodon xanthurus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Chaetodontoplus caeruleopunctatus</i>	Endemic	Biodiversity Institute of Ontario, University of Guelph	
<i>Chaetodontoplus melanosoma</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Chaetodontoplus mesoleucus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Channa striata</i>	Resident	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC; Divine Word College of Legazpi, Legazpi City; AUF Center for Planning, Research, and Development, Angeles University Foundation, Angeles City
<i>Chanos chanos</i>	Resident	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC; Divine Word College of Legazpi, Legazpi City; AUF Center for Planning, Research, and Development, Angeles University Foundation, Angeles City
<i>Cheilinus oxycephalus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Chelmon rostratus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Chiloscylium punctatum</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Chitala omata</i>	Resident	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC
<i>Chrysiptera cyanea</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Chrysiptera galba</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Chrysiptera parasema</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Chrysiptera rex</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Chrysiptera starcki</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Chrysiptera talboti</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	

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Species		Corresponding Institution	Philippine Collaborating Institution
<i>Cirrhilabrus cyanopleura</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Cirrhilabrus lubbocki</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Cirrhilabrus rubrimarginatus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Cirrhitichthys falco</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Clarias batrachus</i>	Resident	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC; Divine Word College of Legazpi, Legazpi City; AUF Center for Planning, Research, and Development, Angeles University Foundation, Angeles City
<i>Coris gaimard</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Cromileptis altivelis</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Cryptocentrus cinctus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Cryptocentrus leptocephalus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Cryptocentrus pavoninoides</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Ctenogobiops tangaroai</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Cubiceps baxteri</i>	Resident	Scripps Institution of Oceanography, University of California San Diego	
<i>Cyprinus carpio carpio</i>	Resident	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC
<i>Dactyloptena orientalis</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Dactylopus dactylopus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Dascyllus aruanus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Dascyllus flavicaudus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Dascyllus melanurus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Dascyllus reticulatus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Dascyllus trimaculatus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Dendrochirus biocellatus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Dendrochirus brachypterus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Dischistodus prosopotaenia</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Dischistodus pseudochrysopoecilus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Dunckerocampus dactyliophorus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Dunckerocampus pessuliferus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Echeneis naucrates</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Echidna nebulosa</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Eleotris acanthopoma</i>	Resident	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC
<i>Epinephelus coioides</i>	Resident	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC
<i>Epinephelus ongus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Forcipiger flavissimus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Gazza achlamys</i>	Resident	Ichthyology, American Museum of Natural History	

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Species		Corresponding Institution	Philippine Collaborating Institution
<i>Gazza minuta</i>	Resident	Ichthyology, American Museum of Natural History; Ecology and Evolutionary Biology, University of Michigan	
<i>Genicanthus lamarck</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Genicanthus melanospilos</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Genicanthus watanabei</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Gerres abbreviatus</i>	Resident	Ichthyology, American Museum of Natural History	
<i>Gerres filamentosus</i>	Resident	Institute of Biology, University of the Philippines, Diliman; Ichthyology, American Museum of Natural History	Institute of Biology, UP Diliman, QC
<i>Giuris margaritacea</i>	Resident	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC
<i>Glossogobius aureus</i>	Resident	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC; Divine Word College of Legazpi, Legazpi City; AUF Center for Planning, Research, and Development, Angeles University Foundation, Angeles City
<i>Gobiodon histrio</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Gobiodon okinawae</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Gobiopterus lacustris</i>	Endemic	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC
<i>Gomphosus varius</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Halichoeres chrysus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Hemitaurichthys polylepis</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Heniochus chrysostomus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Heniochus varius</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Hippocampus barbouri</i>	Resident	Redpath Museum, Project Seahorse Collection, McGill University	
<i>Hippocampus comes</i>	Resident	Redpath Museum, Project Seahorse Collection, McGill University	
<i>Hippocampus spinosissimus</i>	Resident	Redpath Museum, Project Seahorse Collection, McGill University	
<i>Hippocampus trimaculatus</i>	Resident	Redpath Museum, Project Seahorse Collection, McGill University	
<i>Histrio histrio</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Hoplostililus chlupatyi</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Hoplostililus marcosi</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Hoplostililus purpureus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Hypophthalmichthys nobilis</i>	Resident	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC
<i>Hyporhamphus affinis</i>	Resident	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC; Divine Word College of Legazpi, Legazpi City; AUF Center for Planning, Research, and Development, Angeles University Foundation, Angeles City
<i>Hypseleotris agilis</i>	Resident	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC

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Species		Corresponding Institution	Philippine Collaborating Institution
<i>Kuhlia marginata</i>	Resident	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC
<i>Labroides dimidiatus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Lactoria cornuta</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Leiognathus aureus</i>	Resident	Ichthyology, American Museum of Natural History	
<i>Leiognathus bindus</i>	Resident	Ichthyology, American Museum of Natural History	
<i>Leiognathus equulus</i>	Resident	Ichthyology, American Museum of Natural History	
<i>Leiognathus fasciatus</i>	Resident	Ichthyology, American Museum of Natural History	
<i>Leiognathus jonesi</i>	Resident	Ichthyology, American Museum of Natural History	
<i>Leiognathus leuciscus</i>	Resident	Ichthyology, American Museum of Natural History	
<i>Leiognathus panayensis</i>	Endemic	Ichthyology, American Museum of Natural History	
<i>Leiognathus philippinus</i>	Endemic	Ichthyology, American Museum of Natural History	
<i>Leiognathus splendens</i>	Resident	Ichthyology, American Museum of Natural History	
<i>Leiognathus stercorarius</i>	Resident	Ichthyology, American Museum of Natural History	
<i>Leiopotherapon plumbeus</i>	Endemic	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC; Divine Word College of Legazpi, Legazpi City; AUF Center for Planning, Research, and Development, Angeles University Foundation, Angeles City
<i>Leptoscarus vaigiensis</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Liza macrolepis / Chelon macrolepis</i>	Resident	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC
<i>Liza melinoptera</i>	resident	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC; Divine Word College of Legazpi, Legazpi City; AUF Center for Planning, Research, and Development, Angeles University Foundation, Angeles City
<i>Liza subviridis</i>	Resident	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC
<i>Liza subviridis / Chelon subviridis</i>	Resident	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC; Divine Word College of Legazpi, Legazpi City; AUF Center for Planning, Research, and Development, Angeles University Foundation, Angeles City
<i>Lutjanus argentimaculatus</i>	Resident	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC
<i>Lutjanus russellii</i>	Resident	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC
<i>Macolor niger</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Macropharyngodon meleagris</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Megalops cypriniodes</i>	Resident	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC; Divine Word College of Legazpi, Legazpi City; AUF Center for Planning, Research, and Development, Angeles University Foundation, Angeles City
<i>Melichthys niger</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Mesopristes cancellatus</i>	Resident	Marine Fisheries Research Division, National Fisheries Research and Development Institute	
<i>Muraenesox bagio</i>	Resident	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC

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Species		Corresponding Institution	Philippine Collaborating Institution
<i>Mycteroperca interstitialis</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Myripristis adusta</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Myripristis murdjan</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Myripristis violacea</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Naso lituratus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Nemanthias carberryi</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Nematalosa nasus</i>	Resident	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC
<i>Nemateleotris decora</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Nemateleotris magnifica</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Neoglyphidodon melas</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Neoglyphidodon nigroris</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Neoglyphidodon oxyodon</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Novaculichthys taeniourus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Oligolepis acutipennis</i>	Resident	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC; Divine Word College of Legazpi, Legazpi City; AUF Center for Planning, Research, and Development, Angeles University Foundation, Angeles City
<i>Ophieleotris aporos / Giuris margaritacea</i>	Resident	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC; Divine Word College of Legazpi, Legazpi City; AUF Center for Planning, Research, and Development, Angeles University Foundation, Angeles City
<i>Ophiocara porocephala</i>	Resident	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC
<i>Opistognathus rosenblatti</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Oreochromis niloticus</i>	Resident	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC; Divine Word College of Legazpi, Legazpi City; AUF Center for Planning, Research, and Development, Angeles University Foundation, Angeles City
<i>Ostracion meleagris</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Oxycirrhites typus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Oxymonacanthus longirostris</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Pangasianodon hypophthalmus</i>	Resident	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC
<i>Paracanthurus hepatus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Parachromis managuensis</i>	Resident	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC; Divine Word College of Legazpi, Legazpi City; AUF Center for Planning, Research, and Development, Angeles University Foundation, Angeles City
<i>Paracirrhites arcatus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Paragobiodon lacunicolus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Parcheilius carpenteri</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Parupeneus barberinoides</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Parupeneus cyclostomus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	

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Species		Corresponding Institution	Philippine Collaborating Institution
<i>Pelates quadrilineatus</i>	Resident	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC
<i>Pervagor aspricaudus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Pervagor melanocephalus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Pervagor nigrolineatus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Pictichromis diadema</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Pictichromis porphyrea</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Platax orbicularis</i>	Resident	Institute of Biology, University of the Philippines, Diliman; Biodiversity Institute of Ontario, University of Guelph	Institute of Biology, UP Diliman, QC
<i>Platax pinnatus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Plectorhynchus chaetodonoides</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Plectropomus maculatus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Plotosus lineatus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Poecilia mexicana</i>	Resident	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC
<i>Pomacanthus imperator</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Pomacanthus semicirculatus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Pomacentrus caeruleus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Pomacentrus coelestis</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Pomacentrus moluccensis</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Pomacentrus nagasakiensis</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Premnas biaculeatus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Psenes pellucidus</i>	Resident	Scripps Institution of Oceanography, University of California San Diego	
<i>Pseudanthias huchtii</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Pseudanthias lori</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Pseudanthias pascalus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Pseudanthias pleurotaenia</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Pseudanthias squamipinnis</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Pseudanthias truncatus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Pseudobalistes fuscus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Pseudodax moluccanus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Pseudojuloides severnsi</i>	Resident	Ichthyology, Ocean Science Foundation	
<i>Ptereleotris evides</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Ptereleotris zebra</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Pterygoplichthys disjunctivus</i>	Resident	Institute of Biology, University of the Philippines, Diliman; Biodiversity Institute of Ontario, University of Guelph	

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Species		Corresponding Institution	Philippine Collaborating Institution
<i>Pterygoplichthys pardalis</i>	Resident	Institute of Biology, University of the Philippines, Diliman; Biodiversity Institute of Ontario, University of Guelph	Institute of Biology, UP Diliman, QC
<i>Pygoplites diacanthus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Rhinecanthus aculeatus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Rhinecanthus verrucosus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Rhinomuraena quaesita</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Salarias fasciatus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Sardinella fimbriata</i>	Resident	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC
<i>Sardinella jussieu</i>	Resident	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC
<i>Sardinella lemuru</i>	Resident	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC
<i>Sardinella tawilis</i>	Endemic	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC
<i>Sarotherodon melanotheron</i>	Resident	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC; Divine Word College of Legazpi, Legazpi City; AUF Center for Planning, Research, and Development, Angeles University Foundation, Angeles City
<i>Scarus vetula</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Scatophagus argus</i>	Resident	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC
<i>Secutor indicus</i>	Resident	Ichthyology, American Museum of Natural History	
<i>Secutor megalolepis</i>	Resident	Ichthyology, American Museum of Natural History; Ecology and Evolutionary Biology, University of Michigan	
<i>Serranocirrhites latus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Siganus guttatus</i>	Resident	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC
<i>Siganus puellus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Siganus virgatus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Siganus vulpinus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Sphaeramia nematoptera</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Sufflamen chrysopterum</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Sumireyakko venustus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Symphoricthys spilurus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Synanceia verrucosa</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Synchiropus picturatus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Synchiropus splendidus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Taenianotus triacanthus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Terapon jarbua</i>	Resident	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC

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Species		Corresponding Institution	Philippine Collaborating Institution
<i>Toxotes jaculatrix</i>	Resident	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC; Divine Word College of Legazpi, Legazpi City; AUF Center for Planning, Research, and Development, Angeles University Foundation, Angeles City
<i>Trichogaster pectoralis</i>	Resident	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC
<i>Valenciennea sexguttata</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Valenciennea strigata</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Valenciennea wardii</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Variola albimarginata</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Variola louti</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Valenciennea helsdingenii</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Valenciennea puellaris</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Xanthichthys auromarginatus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Zanclus cornutus</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Zebrasoma flavescens</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Zebrasoma scopas</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Zebrasoma veliferum</i>	Resident	Biodiversity Institute of Ontario, University of Guelph	
<i>Zenarchopterus philippinus</i>	Endemic	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC
CHORDATA - Aves			
<i>Accipiter gularis</i>	Resident	Smithsonian National Museum of Natural History	
<i>Aceros waldeni</i>	Endemic	University of Potsdam, Institute for Biology and Biochemistry, Unit of Evolutionary Biology/ Systematic Zoology	
<i>Acridotheres cristatellus</i>	Resident	Smithsonian National Museum of Natural History	
<i>Actenoides lindsayi</i>	Endemic	Smithsonian National Museum of Natural History	
<i>Actitis hypoleucos</i>	Resident	Program for the Human Environment, Rockefeller University	
<i>Aerodramus whiteheadi</i>	Endemic	Smithsonian National Museum of Natural History	
<i>Alcedo atthis</i>	Resident	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC
<i>Alcedo cyanopectus</i>	Endemic	Smithsonian National Museum of Natural History	
<i>Amaurornis phoenicurus</i>	Resident	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC
<i>Anthus gustavi</i>	Resident	Smithsonian National Museum of Natural History	
<i>Arachnothera longirostrata</i>	Resident	Department of Biological Sciences, National University of Singapore	
<i>Bolbopsittacus lunulatus</i>	Endemic	Smithsonian National Museum of Natural History	
<i>Buceros hydrocorax</i>	Endemic	Smithsonian National Museum of Natural History	
<i>Cacomantis variolosus</i>	Resident	Smithsonian National Museum of Natural History	
<i>Caprimulgus macrurus</i>	Resident	Smithsonian National Museum of Natural History	
<i>Cecropis striolata</i>	Resident	Smithsonian National Museum of Natural History	

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Species		Corresponding Institution	Philippine Collaborating Institution
<i>Centropus unirus</i>	Endemic	Smithsonian National Museum of Natural History	
<i>Ceyx melanurus</i>	Endemic	Smithsonian National Museum of Natural History	
<i>Chalcophaps indica</i>	Resident	Smithsonian National Museum of Natural History; Department of Biological Sciences, National University of Singapore	
<i>Chrysocolaptes lucidus</i>	Endemic	Smithsonian National Museum of Natural History	
<i>Collocalia marginata</i>	Resident	Smithsonian National Museum of Natural History	
<i>Collocalia troglodytes</i>	Endemic	Smithsonian National Museum of Natural History	
<i>Copsychus luzoniensis</i>	Endemic	Smithsonian National Museum of Natural History; Museum of Natural Science and Department of Biological Sciences, Louisiana State University; Department of Biological Sciences, National University of Singapore	
<i>Copsychus saularis</i>	Resident	Museum of Natural Science and Department of Biological Sciences, Louisiana State University	
<i>Coracina coerulescens</i>	Endemic	Smithsonian National Museum of Natural History	
<i>Coracina striata</i>	Resident	Smithsonian National Museum of Natural History	
<i>Cyornis rufigastra</i>	Resident	Department of Biological Sciences, National University of Singapore	
<i>Dendrocopos maculatus</i>	Endemic	Smithsonian National Museum of Natural History	
<i>Dicaeum australe</i>	Endemic	Department of Biological Sciences, National University of Singapore	
<i>Dicaeum hypoleucum</i>	Endemic	Department of Biological Sciences, National University of Singapore	
<i>Dicaeum pygmaeum</i>	Endemic	Smithsonian National Museum of Natural History	
<i>Dicaeum trigonostigma</i>	Resident	Department of Biological Sciences, National University of Singapore	
<i>Dicrurus balicassius</i>	Endemic	Smithsonian National Museum of Natural History	
<i>Ducula aenea</i>	Resident	Smithsonian National Museum of Natural History	
<i>Emberiza sulphurata</i>	Resident	Smithsonian National Museum of Natural History	
<i>Eudynamys scolopaceus</i>	Resident	Smithsonian National Museum of Natural History	
<i>Eurostopodus macrotis</i>	Resident	Smithsonian National Museum of Natural History	
<i>Eurystomus orientalis</i>	Resident	Department of Zoology, Division of Birds, Field Museum of Natural History	
<i>Geopelia striata</i>	Resident	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC
<i>Halcyon coromanda</i>	Resident	Smithsonian National Museum of Natural History; Department of Biological Sciences, National University of Singapore	
<i>Halcyon smymensis</i>	Resident	Smithsonian National Museum of Natural History	
<i>Haliaeetus leucogaster</i>	Resident	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC; Philippine Eagle Foundation, Malagos, Davao City
<i>Haliastur indus</i>	Resident	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC; Philippine Eagle Foundation, Malagos, Davao City

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Species		Corresponding Institution	Philippine Collaborating Institution
<i>Harpactes ardens</i>	Endemic	Smithsonian National Museum of Natural History	
<i>Hemiprocne comata</i>	Resident	Smithsonian National Museum of Natural History	
<i>Hirundo tahitica</i>	Resident	Institute of Biology, University of the Philippines, Diliman; Smithsonian National Museum of Natural History	Institute of Biology, UP Diliman, QC
<i>Hypothymis azurea</i>	Resident	Smithsonian National Museum of Natural History	
<i>Hypothymis helenae</i>	Endemic	Smithsonian National Museum of Natural History	
<i>Hypsipetes philippinus</i>	Endemic	Department of Biological Sciences, National University of Singapore	
<i>Ichthyophaga ichthaetus</i>	Resident	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC; Philippine Eagle Foundation, Malagos, Davao City
<i>Irena cyanogaster</i>	Endemic	Smithsonian National Museum of Natural History	
<i>Ixos philippinus</i>	Endemic	Smithsonian National Museum of Natural History	
<i>Lalage nigra</i>	Resident	Department of Biological Sciences, National University of Singapore	
<i>Lanius cristatus</i>	Resident	Institute of Biology, University of the Philippines, Diliman; Smithsonian National Museum of Natural History	Institute of Biology, UP Diliman, QC
<i>Lanius schach</i>	Resident	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC
<i>Leptocoma sperata</i>	Resident	Smithsonian National Museum of Natural History	
<i>Loriculus philippensis</i>	Endemic	Smithsonian National Museum of Natural History	
<i>Megalurus palustris</i>	Resident	Institute of Biology, University of the Philippines, Diliman; Smithsonian National Museum of Natural History	Institute of Biology, UP Diliman, QC
<i>Microhierax erythrogenys</i>	Endemic	Smithsonian National Museum of Natural History	
<i>Monticola solitarius</i>	Resident	Smithsonian National Museum of Natural History	
<i>Motacilla cinerea</i>	Resident	Institute of Biology, University of the Philippines, Diliman; Department of Biological Sciences, National University of Singapore	Institute of Biology, UP Diliman, QC
<i>Mulleripicus funebris</i>	Endemic	Smithsonian National Museum of Natural History	
<i>Nectarinia jugularis</i>	Resident	Department of Biological Sciences, National University of Singapore; Smithsonian National Museum of Natural History	
<i>Nectarinia sperata</i>	Resident	Department of Biological Sciences, National University of Singapore	
<i>Ninox philippensis</i>	Endemic	Smithsonian National Museum of Natural History; Museum of Zoology, University of Michigan	
<i>Orthotomus atrogularis</i>	Resident	Smithsonian National Museum of Natural History	
<i>Otus megalotis</i>	Endemic	Smithsonian National Museum of Natural History	
<i>Pachycephala philippinensis</i>	Endemic	Smithsonian National Museum of Natural History	
<i>Passer montanus</i>	Resident	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC
<i>Periparus elegans</i>	Endemic	Smithsonian National Museum of Natural History	

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Species		Corresponding Institution	Philippine Collaborating Institution
<i>Phaenicophaeus superciliosus</i>	Endemic	Smithsonian National Museum of Natural History	
<i>Phapitreron amethystinus</i>	Endemic	Smithsonian National Museum of Natural History	
<i>Phapitreron leucotis</i>	Endemic	Smithsonian National Museum of Natural History	
<i>Phylloscopus cebuensis</i>	Endemic	Smithsonian National Museum of Natural History; Department of Biological Sciences, National University of Singapore	
<i>Pithecophaga jefferyi</i>	Endemic	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC; Philippine Eagle Foundation, Malagos, Davao City
<i>Pitta erythrogaster</i>	Resident	Smithsonian National Museum of Natural History; Department of Biological Sciences, National University of Singapore	
<i>Prioniturus luconensis</i>	Endemic	Smithsonian National Museum of Natural History	
<i>Prionochilus olivaceus</i>	Endemic	Smithsonian National Museum of Natural History	
<i>Ptilinopus leclancheri</i>	Resident	Smithsonian National Museum of Natural History	
<i>Ptilinopus occipitalis</i>	Endemic	Smithsonian National Museum of Natural History	
<i>Pycnonotus goiavier</i>	Resident	Smithsonian National Museum of Natural History; Department of Biological Sciences, National University of Singapore; Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC
<i>Pycnonotus urostictus</i>	Endemic	Smithsonian National Museum of Natural History; Department of Biological Sciences, National University of Singapore	
<i>Rhabdornis inornatus</i>	Endemic	Smithsonian National Museum of Natural History	
<i>Rhabdornis mysticalis</i>	Endemic	Smithsonian National Museum of Natural History	
<i>Rhipidura javanica</i>	Resident	Department of Biological Sciences, National University of Singapore; Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC
<i>Rostratula benghalensis</i>	Resident	Smithsonian National Museum of Natural History	
<i>Sitta frontalis</i>	Resident	Smithsonian National Museum of Natural History	
<i>Spilornis cheela</i>	Resident	Smithsonian National Museum of Natural History	
<i>Spilornis holospilus</i>	Endemic	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC; Philippine Eagle Foundation, Malagos, Davao City
<i>Spizaetus philippensis</i>	Endemic	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC; Philippine Eagle Foundation, Malagos, Davao City
<i>Stachyris capitalis</i>	Endemic	Smithsonian National Museum of Natural History	
<i>Streptopelia bitorquata</i>	Resident	Smithsonian National Museum of Natural History	
<i>Terpsiphone cinnamomea</i>	Resident	Smithsonian National Museum of Natural History	
<i>Todiramphus chloris</i>	Resident	Smithsonian National Museum of Natural History; Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC
<i>Treron pompadora</i>	Resident	Smithsonian National Museum of Natural History	
<i>Zosterops nigrorum</i>	Endemic	Smithsonian National Museum of Natural History	
CHORDATA - Chondrichthyes			
<i>Carcharhinus melanopterus</i>	Resident	Wealth from Oceans Flagship, CSIRO Marine and Atmospheric Research	

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Species		Corresponding Institution	Philippine Collaborating Institution
<i>Rhincodon typus</i>	Resident	Scripps Institution of Oceanography, University of California San Diego	
CHORDATA - Mammalia			
<i>Bos taurus</i>	Resident	Animal and Dairy Sciences Cluster, College of Agriculture, University of the Philippines Los Banos	Animal and Dairy Sciences Cluster, College of Agriculture, UP Los Banos
CHORDATA - Reptilia			
<i>Crocodylus mindorensis</i>	Endemic	College of Life Sciences, Anhui Normal University	
CNIDARIA - Anthozoa			
<i>Entacmaea quadricolor</i>	Resident	Biotechnology and Molecular Genetics, University of Bremen	
<i>Heteractis crispa</i>	Resident	Biotechnology and Molecular Genetics, University of Bremen	
ECHINODERMATA - Asteroidea			
<i>Acanthaster planci</i>	Resident	Vogler C., Courant Research Center Geobiology, University of Goettingen	
ECHINODERMATA - Holothuroidea			
<i>Pearsonothuria graeffei</i>	Resident	Water Quality, Australian Institute of Marine Science	
<i>Stichopus horrens</i>	Resident	Australian Institute of Marine Science	
<i>Thelenota rubralineata</i>	Resident	Australian Institute of Marine Science	
ECHINODERMATA - Ophiuroidea			
<i>Ophiactis savignyi</i>	Resident	Zoology, University of Otago	
MOLLUSCA - Bivalvia			
<i>Adipicola crypta</i>	Resident	Systematic Adaptation Evolution, Universie Pierre et Marie Curie	
<i>Adipicola longissima</i>	Resident	Systematic and Evolution, Museum National d'Histoire Naturelle; Adaptation aux Milieux Extremes, Universite Pierre et Marie Curie	
<i>Idas japonica</i>	Resident	Systematic and Evolution, Museum National d'Histoire Naturelle	
MOLLUSCA - Cephalopoda			
<i>Nautilus pompilius</i>	Resident	Biology Department, University of Illinois at Springfield	
MOLLUSCA - Gastropoda			
<i>Aeolidiopsis ransoni</i>	Resident	Biology, University of Cadiz	
<i>Agathodonta nortoni</i>	Resident	The University of Tokyo, Department of Marine Ecosystems Dynamics	
<i>Armina semperi</i>	Resident	Invertebrate Zoology and Geology, California Academy of Sciences	
<i>Astralium calcar</i>	Resident	Zoology Department, The Natural History Museum	
<i>Astralium rhodostomum</i>	Resident	Zoology Department, The Natural History Museum	
<i>Astralium roseobasis</i>	Endemic	Zoology Department, The Natural History Museum	

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Species		Corresponding Institution	Philippine Collaborating Institution
<i>Babakina indopacifica</i>	Resident	Invertebrate Zoology and Geology, California Academy of Sciences	
<i>Baeolidia japonica</i>	Resident	Biology, University of Cadiz	
<i>Baeolidia moebii</i>	Resident	Departamento de Biología, Universidad de Cadiz, Facultad de Ciencias del Mar y Ambientales	
<i>Berghia salaamica</i>	Resident	Biology, University of Cadiz	
<i>Bolma girgyllus</i>	Resident	Zoology Department, The Natural History Museum	
<i>Bolma persica</i>	Resident	Zoology Department, The Natural History Museum	
<i>Brotia pagodula</i>	Resident	Institute of Systematic Zoology, Humboldt University	
<i>Cerithidea microptera</i>	Resident	Zoology Department, The Natural History Museum	
<i>Cerithidea ornate</i>	Resident	Zoology Department, The Natural History Museum	
<i>Cerithidea quadrata</i>	Resident	Zoology Department, The Natural History Museum	
<i>Cerithium echinatum</i>	Resident	Zoology Department, The Natural History Museum	
<i>Cerithium nodulosum</i>	Resident	Zoology Department, The Natural History Museum	
<i>Chicoreus brunneus</i>	Resident	Animal and Human Biology, Rome University	
<i>Chromodoris coi</i>	Resident	Department of Invertebrate Zoology and Geology, California Academy of Sciences	
<i>Cinguloterebra triseriata</i>	Resident	Biology, University of Utah	The Marine Science Institute, UP Diliman, QC
<i>Clavus canalicularis</i>	Resident	Biology, University of Utah	The Marine Science Institute, UP Diliman, QC
<i>Clavus exasperatus</i>	Resident	Biology, University of Utah	The Marine Science Institute, UP Diliman, QC
<i>Clavus viduus</i>	Resident	Biology, University of Utah	The Marine Science Institute, UP Diliman, QC
<i>Colubraria muricata</i>	Resident	Oliverio M., Animal and Human Biology, Sapienza University of Rome	
<i>Colubraria nitidula</i>	Resident	Oliverio M., Animal and Human Biology, Sapienza University of Rome	
<i>Conus betulinus</i>	Resident	Biology, University of Utah	The Marine Science Institute, UP Diliman, QC
<i>Conus ebraeus</i>	Resident	Department of Ecology and Evolutionary Biology, Museum of Zoology, University of Michigan	
<i>Conus miliaris</i>	Resident	Museum of Zoology, University of Michigan	
<i>Conus musicus</i>	Resident	Museum of Zoology and Department of Ecology & Evolutionary Biology, University of Michigan	
<i>Conus rolandi</i>	Resident	Systematique & Evolution, MNHN	
<i>Conus sulcatus</i>	Resident	Systematique & Evolution, MNHN; Biology, University of Utah	The Marine Science Institute, UP Diliman, QC
<i>Dendronotus regius</i>	Resident	Invertebrate Zoology and Geology, California Academy of Sciences	
<i>Dermomurex neglecta</i>	Resident	Animal and Human Biology, University of Rome La Sapienza	
<i>Doto ussi</i>	Resident	Invertebrate Zoology and Geology, California Academy of Sciences	
<i>Drupa morum</i>	Resident	INSDC. Natural History Museum, Zoology (Mollusca)	
<i>Drupella cornus</i>	Resident	INSDC. Natural History Museum, Zoology (Mollusca)	

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Species		Corresponding Institution	Philippine Collaborating Institution
<i>Drupella margariticola</i>	Resident	INSDC. Natural History Museum, Zoology (Mollusca)	
<i>Echinolittorina quadricincta</i>	Resident	Zoology Department, The Natural History Museum	
<i>Echinolittorina reticulata</i>	Resident	Zoology Department, The Natural History Museum	
<i>Echinolittorina trochoides</i>	Resident	Zoology Department, The Natural History Museum	
<i>Echinolittorina vidua</i>	Resident	Zoology Department, The Natural History Museum	
<i>Eosipho aldermenensis</i>	Resident	Systematique & Evolution, MNHN	
<i>Eosipho coriolis</i>	Resident	Systematique & Evolution, MNHN	
<i>Eulota mighelsiana</i>	Resident	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC
<i>Favartia jeanae</i>	Resident	Animal and Human Biology, Rome University La Sapienza	
<i>Favartia mactanensis</i>	Resident	Animal and Human Biology, Rome University La Sapienza	
<i>Favartia maculata</i>	Resident	Animal and Human Biology, Rome University La Sapienza	
<i>Favartia ponderi</i>	Resident	Animal and Human Biology, Rome University La Sapienza	
<i>Ferrissia fragilis</i>	Resident	Museum of Zoology, Mollusk Division, University of Michigan	
<i>Gaza daedala</i>	Resident	Zoology Dept, Natural History Museum	
<i>Gemmula diomedea</i>	Resident	Biology, University of Utah	The Marine Science Institute, UP Diliman, QC; Department of Biochemistry and Molecular Biology, College of Medicine, UP Manila
<i>Gemmula lisajoni</i>	Resident	Biology, University of Utah	The Marine Science Institute, UP Diliman, QC; Department of Biochemistry and Molecular Biology, College of Medicine, UP Manila
<i>Gemmula monilifera</i>	Resident	Biology, University of Utah	The Marine Science Institute, UP Diliman, QC; Department of Biochemistry and Molecular Biology, College of Medicine, UP Manila
<i>Gemmula speciosa</i>	Resident	Biology, University of Utah	The Marine Science Institute, UP Diliman, QC; Department of Biochemistry and Molecular Biology, College of Medicine, UP Manila
<i>Halgerda batangas</i>	Resident	Invertebrate Zoology and Geology, California Academy of Sciences	
<i>Halgerda willeyi</i>	Resident	Invertebrate Zoology and Geology, California Academy of Sciences	
<i>Haustellum haustellum</i>	Resident	Animal and Human Biology, University of Rome La Sapienza	
<i>Homalocantha pele</i>	Resident	Animal and Human Biology, Rome University La Sapienza	
<i>Inquisitor intertincta</i>	Resident	Biology, University of Utah	The Marine Science Institute, UP Diliman, QC
<i>Jagora asperata</i>	Endemic	Institute of Systematic Zoology, Humboldt University	
<i>Jagora dactylus</i>	Endemic	Institute of Systematic Zoology, Humboldt University	
<i>Janolus mirabilis</i>	Resident	Invertebrate Zoology and Geology, California Academy of Sciences	

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Species		Corresponding Institution	Philippine Collaborating Institution
<i>Lienardia cincta</i>	Resident	Biology, University of Utah	The Marine Science Institute, UP Diliman, QC
<i>Lienardia crassicostata</i>	Resident	Biology, University of Utah	The Marine Science Institute, UP Diliman, QC
<i>Lienardia gilberti</i>	Resident	Biology, University of Utah	The Marine Science Institute, UP Diliman, QC
<i>Lienardia purpurata</i>	Resident	Biology, University of Utah	The Marine Science Institute, UP Diliman, QC
<i>Lienardia rubida</i>	Resident	Biology, University of Utah	The Marine Science Institute, UP Diliman, QC
<i>Littoraria intermedia</i>	Resident	Zoology, Natural History Museum	
<i>Littoraria lutea</i>	Resident	Zoology, Natural History Museum	
<i>Littoraria undulata</i>	Resident	Zoology, Natural History Museum	
<i>Lophiotoma acuta</i>	Resident	Biology, University of Utah	The Marine Science Institute, UP Diliman, QC; Department of Biochemistry and Molecular Biology, College of Medicine, UP Manila
<i>Lophiotoma albina</i>	Resident	Biology, University of Utah	The Marine Science Institute, UP Diliman, QC; Department of Biochemistry and Molecular Biology, College of Medicine, UP Manila
<i>Lophiotoma cerithiformis</i>	Resident	Biology, University of Utah	The Marine Science Institute, UP Diliman, QC; Department of Biochemistry and Molecular Biology, College of Medicine, UP Manila
<i>Lophiotoma jickeli</i>	Resident	Biology, University of Utah	The Marine Science Institute, UP Diliman, QC; Department of Biochemistry and Molecular Biology, College of Medicine, UP Manila
<i>Lophiotoma olangoensis</i>	Resident	Biology, University of Utah	The Marine Science Institute, UP Diliman, QC; Department of Biochemistry and Molecular Biology, College of Medicine, UP Manila
<i>Lunella cinerea</i>	Resident	Tomoyuki Nakano National Museum of Nature and Science, Department of Geology and Palaeontology	
<i>Maculotriton seriale</i>	Resident	INSDC. Natural History Museum, Zoology (Mollusca)	
<i>Mammilla priamus</i>	Resident	Department of Biochemistry I - Receptor Biochemistry, Ruhr-University Bochum	
<i>Manaria clandestina</i>	Resident	Systematique & Evolution, MNHN	
<i>Mancinella alouina</i>	Resident	INSDC. Natural History Museum, Zoology (Mollusca)	
<i>Marionia arborescens</i>	Resident	Invertebrate Zoology and Geology, California Academy of Sciences	
<i>Marionia distincta</i>	Resident	Invertebrate Zoology and Geology, California Academy of Sciences	
<i>Marionia elongoviridis</i>	Resident	Invertebrate Zoology and Geology, California Academy of Sciences	
<i>Melibe digitata</i>	Resident	Department of Invertebrate Zoology, California Academy of Sciences; Invertebrate Zoology and Geology, California Academy of Sciences	
<i>Melibe viridis</i>	Resident	Invertebrate Zoology and Geology, California Academy of Sciences	
<i>Menathais tuberosa</i>	Resident	INSDC. Natural History Museum, Zoology (Mollusca)	
<i>Moridilla brockii</i>	Resident	Biology, University of Cadiz	

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Species		Corresponding Institution	Philippine Collaborating Institution
<i>Murex pecten</i>	Resident	Animal and Human Biology, University of Rome La Sapienza	
<i>Naquetia cumingii</i>	Resident	Animal and Human Biology, University of Rome La Sapienza	
<i>Nembrotha chamberlaini</i>	Resident	Biodiversidad y Biología Evolutiva, Museo Nacional de Ciencias Naturales	
<i>Nembrotha cristata</i>	Resident	Biodiversidad y Biología Evolutiva, Museo Nacional de Ciencias Naturales	
<i>Nembrotha guttata</i>	Resident	Biodiversidad y Biología Evolutiva, Museo Nacional de Ciencias Naturales	
<i>Nembrotha lineolata</i>	Resident	Biodiversidad y Biología Evolutiva, Museo Nacional de Ciencias Naturales	
<i>Nembrotha livingstonei</i>	Resident	Biodiversidad y Biología Evolutiva, Museo Nacional de Ciencias Naturales	
<i>Nembrotha milleri</i>	Resident	Biodiversidad y Biología Evolutiva, Museo Nacional de Ciencias Naturales	
<i>Nembrotha mullineri</i>	Resident	Biodiversidad y Biología Evolutiva, Museo Nacional de Ciencias Naturales	
<i>Nembrotha nigerrima</i>	Resident	Biodiversidad y Biología Evolutiva, Museo Nacional de Ciencias Naturales	
<i>Nerita histrio</i>	Resident	Center for Population Biology, University of California Davis	
<i>Nerita litterata</i>	Resident	Center for Population Biology, University of California Davis	
<i>Nerita patula</i>	Resident	Center for Population Biology, University of California Davis	
<i>Nerita plicata</i>	Resident	Center for Population Biology, University of California Davis	
<i>Nerita polita</i>	Resident	Center for Population Biology, University of California Davis	
<i>Nerita reticulata</i>	Resident	Center for Population Biology, University of California Davis	
<i>Nerita spengleriana</i>	Resident	Center for Population Biology, University of California Davis	
<i>Neritilia cavernicola</i>	Resident	The University of Tokyo, Department of Marine Ecosystems Dynamics	
<i>Neritina asperulata</i>	Resident	The University of Tokyo, Department of Marine Ecosystems Dynamics	
<i>Neritina iris</i>	Resident	The University of Tokyo, Department of Marine Ecosystems Dynamics	
<i>Notobryon wardi</i>	Resident	Invertebrate Zoology and Geology, California Academy of Sciences	
<i>Noumeaella isa</i>	Resident	Biology, University of Cadiz	
<i>Oncomelania hupensis</i>	Resident	Department of Malacology, The Academy of Natural Sciences	
<i>Pascula ochrostoma</i>	Resident	INSDC. Natural History Museum, Zoology (Mollusca)	

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Species		Corresponding Institution	Philippine Collaborating Institution
<i>Patelloida saccharina</i>	Resident	Malacology/Zoology, Florida Museum of Natural History, University of Florida	
<i>Patelloida tagnan</i>	Resident	Malacology/Zoology, Florida Museum of Natural History, University of Florida	
<i>Pinufius rebus</i>	Resident	Invertebrate Zoology and Geology, California Academy of Sciences	
<i>Plakobranchnus ocellatus</i>	Resident	AG Mollusca, Zoologisches Forschungsmuseum Alexander Koenig	
<i>Polinices jukesii</i>	Resident	Department of Biochemistry I - Receptor Biochemistry, Ruhr-University Bochum	
<i>Protaeolidiella juliae</i>	Resident	Biology, University of Cadiz	
<i>Pseudoliotina springsteeni</i>	Resident	Zoology Dept, Natural History Museum	
<i>Pseudomelatomia moesta</i>	Resident	Biology, University of Utah	The Marine Science Institute, UP Diliman, QC
<i>Pterynotus elongatus</i>	Resident	Animal and Human Biology, Rome University La Sapienza	
<i>Rapa rapa</i>	Resident	Universita di Roma La Sapienza, Dipartimento di Biologia Animale e dell'Uomo, Viale dell'Universita	
<i>Ryssota sagittifera</i>	Resident	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC
<i>Sarasinula plebeia</i>	Resident	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC
<i>Satsuma batanica</i>	Resident	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC
<i>Semiricinula squamosa</i>	Resident	INSDC. Natural History Museum, Zoology (Mollusca)	
<i>Stomatolina rubra</i>	Resident	Zoology Dept, Natural History Museum	
<i>Tambja morosa</i>	Resident	Biodiversidad y Biología Evolutiva, Museo Nacional de Ciencias Naturales	
<i>Tambja olivaria</i>	Resident	Biodiversidad y Biología Evolutiva, Museo Nacional de Ciencias Naturales	
<i>Tectus conus</i>	Resident	Zoology Department, The Natural History Museum	
<i>Telescopium telescopium</i>	Resident	Zoology Department, The Natural History Museum	
<i>Terebra intertincta</i>	Resident	Biology, University of Utah	The Marine Science Institute, UP Diliman, QC
<i>Terebra larvaeformis</i>	Resident	Biology, University of Utah	The Marine Science Institute, UP Diliman, QC
<i>Terebralia sulcata</i>	Resident	Zoology Department, The Natural History Museum	
<i>Thalotia attenuatus</i>	Resident	Zoology Department, The Natural History Museum	
<i>Trochomorpha troilus</i>	Resident	Institute of Biology, University of the Philippines, Diliman	Institute of Biology, UP Diliman, QC
<i>Trochus maculatus</i>	Resident	Zoology Department, The Natural History Museum	
<i>Turbo chryostomus</i>	Resident	Zoology Department, The Natural History Museum	
<i>Turbo petholatus</i>	Resident	Zoology Department, The Natural History Museum	
<i>Turbo reevii</i>	Resident	Tomoyuki Nakano National Museum of Nature and Science, Department of Geology and Palaeontology	

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Species		Corresponding Institution	Philippine Collaborating Institution
<i>Turridrupa bijubata</i>	Resident	Biology, University of Utah	The Marine Science Institute, UP Diliman, QC; Department of Biochemistry and Molecular Biology, College of Medicine, UP Manila
<i>Turridrupa cerithina</i>	Resident	Biology, University of Utah	The Marine Science Institute, UP Diliman, QC
<i>Turriss annulata</i>	Resident	Biology, University of Utah	The Marine Science Institute, UP Diliman, QC; Department of Biochemistry and Molecular Biology, College of Medicine, UP Manila
<i>Turriss assyria</i>	Resident	Biology, University of Utah	The Marine Science Institute, UP Diliman, QC; Department of Biochemistry and Molecular Biology, College of Medicine, UP Manila
<i>Turriss babylonica</i>	Resident	Biology, University of Utah	The Marine Science Institute, UP Diliman, QC; Department of Biochemistry and Molecular Biology, College of Medicine, UP Manila
<i>Turriss cristata</i>	Resident	Biology, University of Utah	The Marine Science Institute, UP Diliman, QC; Department of Biochemistry and Molecular Biology, College of Medicine, UP Manila
<i>Turriss cryptorrhaphe</i>	Resident	Biology, University of Utah	The Marine Science Institute, UP Diliman, QC; Department of Biochemistry and Molecular Biology, College of Medicine, UP Manila
<i>Turriss dollyae</i>	Resident	Biology, University of Utah	The Marine Science Institute, UP Diliman, QC; Department of Biochemistry and Molecular Biology, College of Medicine, UP Manila
<i>Turriss grandis</i>	Resident	Biology, University of Utah	The Marine Science Institute, UP Diliman, QC; Department of Biochemistry and Molecular Biology, College of Medicine, UP Manila
<i>Turriss nadaensis</i>	Resident	Biology, University of Utah	The Marine Science Institute, UP Diliman, QC; Department of Biochemistry and Molecular Biology, College of Medicine, UP Manila
<i>Turriss normandavidsoni</i>	Resident	Biology, University of Utah	The Marine Science Institute, UP Diliman, QC; Department of Biochemistry and Molecular Biology, College of Medicine, UP Manila
<i>Turriss spectabilis</i>	Resident	Biology, University of Utah	The Marine Science Institute, UP Diliman, QC; Department of Biochemistry and Molecular Biology, College of Medicine, UP Manila
<i>Turriss undosa</i>	Resident	Biology, University of Utah	The Marine Science Institute, UP Diliman, QC; Department of Biochemistry and Molecular Biology, College of Medicine, UP Manila
<i>Unedogemmula tayabasensis</i>	Resident	Biology, University of Utah	The Marine Science Institute, UP Diliman, QC; Department of Biochemistry and Molecular Biology, College of Medicine, UP Manila
<i>Vexillum plicarium</i>	Resident	Animal and Human Biology, Sapienza University of Rome	
NEMERTEA			
<i>Diplomma serpentina</i>	Resident	Hiroshi Kajihara Hokkaido University	College of Fisheries and Ocean Sciences, UP in the Visayas, Miagao, Iloilo
PLATYHELMINTHES - Cestoda			
<i>Taenia solium</i>	Resident	Division of Parasitic Diseases, Centers for Disease Control and Prevention	

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Species		Corresponding Institution	Philippine Collaborating Institution
PLATYHELMINTHES - Trematoda			
<i>Paragonimus westermani</i>	Resident	Zoology and Tropical Ecology, James Cook University of North Queensland	
<i>Schistosoma japonicum</i>	Resident	GenBank staff at the National Library of Medicine	Department of Parasitology, College of Public Health, University of the Philippines, Manila
