

## A taxonomic guide to the Echinodermata of the South Atlantic Bight, USA:

### 1. Sea cucumbers (Echinodermata: Holothuroidea)

DAVID L. PAWSON<sup>1</sup>, DORIS J. PAWSON<sup>1</sup> & RACHAEL A. KING<sup>2</sup>

<sup>1</sup>National Museum of Natural History, Mail Stop MRC163, Smithsonian Institution, Washington DC 20013-7012, USA. E-mail: pawsond@si.edu

<sup>2</sup>Southeast Regional Taxonomic Center (SERTC), South Carolina Department of Natural Resources, P.O. Box 12559, Charleston, South Carolina 29422-2559, USA. Current address: South Australian Museum, North Terrace, Adelaide, South Australia 5000, Australia.

### Table of contents

Abstract .....	2
Introduction .....	3
Materials and methods .....	9
Checklist of South Atlantic Bight holothurians .....	10
Key to Orders of Holothuroidea known from the South Atlantic Bight .....	11
Key to members of the Order Dendrochirotida known from the South Atlantic Bight .....	11
Key to members of the Order Aspidochirotida known from the South Atlantic Bight .....	12
Key to members of the Order Molpadiida known from the South Atlantic Bight .....	12
Key to members of the Order Apodida known from the South Atlantic Bight .....	13
Systematics .....	13
Order Dendrochirotida Grube, 1840 .....	13
Family Cucumariidae Ludwig, 1894 .....	13
<i>Duasmodactyla seguroensis</i> (Deichmann, 1930) .....	13
<i>Euthyonacta solida</i> (Deichmann, 1930) .....	14
<i>Aslia</i> Rowe, 1970 .....	14
<i>Aslia pygmaea</i> (Théel, 1886a). ....	15
<i>Aslia surinamensis</i> (Semper 1868). ....	17
<i>Paracolochirus</i> , new genus .....	18
<i>Paracolochirus mysticus</i> (Deichmann 1930).....	18
<i>Thyonella gemmata</i> (Pourtales, 1851) .....	19
<i>Thyonella pervicax</i> (Théel, 1886a) .....	20
Family Sclerodactylidae Panning, 1949 .....	22
<i>Euthyonidiella trita</i> (Sluiter, 1910).....	22
<i>Pseudothyone belli</i> (Ludwig, 1886). ....	23
<i>Sclerodactyla briareus</i> (Lesueur, 1824).....	24
<i>Havelockia scabra</i> (Verrill, 1873) .....	25
Family Phyllophoridae Östergren, 1907 .....	25
<i>Pentamera pulcherrima</i> Ayres, 1854.....	25
<i>Phyllophorus (Urodemella) arenicola</i> Pawson & Miller, 1992 .....	26
<i>Thyone crassidisca</i> Pawson and Miller 1981 .....	27
<i>Thyone deichmannae</i> Madsen, 1941 .....	28
<i>Thyone pawsoni</i> Tommasi, 1972. ....	30
<i>Thyone pseudofusus</i> Deichmann, 1930.....	30
Family Psolidae Forbes, 1841 .....	31
<i>Psolus fabricii</i> (Düben & Koren, 1846) .....	31
<i>Psolus operculatus</i> (Pourtales, 1868) .....	32
<i>Psolus tuberculosus tuberculosus</i> Théel, 1886b .....	33
Order Aspidochirotida Grube, 1840.....	34

Family Stichopodidae Haeckel, 1896 .....	34
<i>Isostichopus badionotus</i> (Selenka, 1867) .....	34
Family Holothuriidae Ludwig, 1894 .....	35
<i>Actinopyga agassizii</i> (Selenka, 1867) .....	35
<i>Holothuria (Halodeima) grisea</i> Selenka, 1867 .....	36
<i>Holothuria (Holothuria) dakarensis</i> Panning, 1939 .....	37
<i>Holothuria (Semperothuria) surinamensis</i> Ludwig, 1875 .....	38
<i>Holothuria (Theelothuria) princeps</i> Selenka, 1867 .....	39
<i>Holothuria (Vaneyothuria) lentiginosa</i> enodis Miller and Pawson, 1979 .....	40
Order Molpadiida Haeckel, 1896 .....	40
Family Molpadiidae Müller, 1850 .....	40
<i>Molpadia oolitica</i> (Pourtalès 1851) .....	40
Family Caudinidae Heding, 1931 .....	41
<i>Paracaudina chilensis obesacauda</i> (H.L. Clark, 1908) .....	41
Order Apodida Brandt, 1835 .....	42
Family Synaptidae Östergren, 1898 .....	42
<i>Epitonapta roseola</i> (Verrill, 1874) .....	42
<i>Labidoplax buskii</i> (McIntosh, 1866) .....	43
<i>Leptosynapta tenuis</i> (Ayres, 1851) .....	44
Family Chiridotidae Östergren, 1898 .....	44
<i>Chiridota ferruginea</i> (Verrill, 1882) .....	44
Acknowledgements .....	45
Literature cited .....	45

## Abstract

A summary account is given of the 33 holothurian species known from the South Atlantic Bight, from Cape Hatteras, North Carolina, to Cape Canaveral, Florida, from the shore to a depth of 200 meters. Four of the six known orders of holothurians are represented in the study area. Each species is diagnosed and illustrated; citations of informative literature and brief discussions of distribution and general biology are included. Also included are dichotomous keys to aid in identification to the species level. A new genus is erected to accommodate *Pseudocolochirus mysticus* Deichmann, 1930. *Ocnus pygmaeus* (Théel, 1886b) and *O. surinamensis* (Semper, 1868) are referred to the genus *Aslia* Rowe, 1970.

**Key words:** Holothurians, sea cucumbers, South Atlantic Bight, SERTC