

Kurzmitteilung

Isopoda of the European North Atlantic from depths exceeding 2000 m, excluding Epicaridea

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ABSTRACT. – This up-to date checklist of North Atlantic Isopoda from depths exceeding 2000 m comprises 216 species of 77 genera and 25 families. The species and authorities are listed. Only the very general distribution is presented, the depth range (if more than one sample) is provided for all species.

KEYWORDS: Isopoda, checklist, North Atlantic, deep sea, >2000 m.

Introduction

A first checklist of isopods from bathyal to abyssal depths in the Atlantic Ocean (in the north and south below 2000 m) was published by MENZIES (1962). Since then, new species were described, and many were synonymised. Therefore an update of this checklist was necessary for the North Atlantic and the Mediterranean, especially for scientists working in the European and Russian Arctic. This checklist only comprises those papers in which new species are described and the gross geographic area where these species were first recorded. The reference list accordingly presents those papers in which new species are described living below 2000 m depth. The inclusion of all references dealing with the listed species would exceed the scope of this paper. The new species described in the papers by GEORGE (2001, 2003, 2004) have to be treated with care. Some of the species described in these papers will have to be synonymized (BRÖKELAND, KAISER, WILSON, pers. comm.), but are included in this list because revisions are not available yet. The genus *Nannoniscella* GEORGE, 2001 is rejected here. It includes the monotypic genus and species *Nannoniscoides biscutatus* SIEBENALLER & HESSLER, 1977, this species and genus could have simply been rediagnosed.

Material and methods

The present list is based on an old compilation published by MENZIES (1962), the world catalogue of isopods from BRIAN KENSLEY and MARYLIN SCHOTTE, a biogeographic publication by SVAVARSSON (1993) on Arctic Isopoda, records of Isopoda from the deep sea off northeastern Greenland (BRANDT 1997), as well as recent data on new records from the Zoological Records.

Checklist of North Atlantic and Mediterranean Isopoda

Taxa	Region	Depth [m]	Taxa	Region	Depth [m]
ANTHURIDEA Leach, 1814			<i>argentinae</i> Kensley, 1982	Argentine Basin	1002-4392
Antheluridae Poore & Lew Ton, 1988			<i>charadri</i> Negoescu, 1992	Bays of Biscay	1894-4659
<i>Ananthura</i> Barnard, 1925			<i>hendili</i> Wolff, 1956	Banda Trench	6490-6650
<i>abyssorum</i> (Norman & Stebbing, 1886)	Davis Strait	3500-4596 [<i>Anthelura</i>]	<i>micrura</i> Kensley, 1982	Brazil	520-2494
<i>Anthelura</i> Norman & Stebbing, 1886			<i>Pseudanthura</i> Richardson, 1911	West Africa	930-3200
<i>truncata</i> (Hansen, 1916)	N. Atlantic	2258-2702	<i>lateralis</i> Richardson, 1911		
Anthuridae Leach, 1814			Suborder ASELLOTA Latreille, 1803		
<i>Cyathura</i> (Cyathura) Norman & Stebbing, 1886	Argentine Basin	508-2707	Acanthaspidiidae Menzies, 1962		
<i>profunda</i> Kensley, 1982			<i>Acanthaspidia</i> Stebbing, 1898	N. Atlantic	4000
<i>Malacanthura</i> Barnard, 1925			<i>decorata</i> (Hansen, 1895)		[<i>Tolanthe</i>]
<i>truncata</i> (Hansen, 1916)	Guiana Basin	520-2870	Dendrotionidae Vanhöffen, 1914		
Hyssuridae Wägele, 1981			<i>Dendromunna</i> Menzies, 1962	N.E. Atlantic	1271-2925
<i>Hyssura</i> Norman & Stebbing, 1886			<i>compa</i> Lincoln & Boxshall, 1983		
<i>producta</i> Norman & Stebbing, 1886	N. Atlantic	2651-2900	<i>Dendrotia</i> Sars, 1872	N.E. Atlantic	1600-2200
<i>profunda</i> Barnard, 1925	Mediterranean	2018	<i>elegans</i> Lincoln & Boxshall, 1983	N.E. Atlantic	1160-2076
<i>Kupellonura</i> Barnard, 1925			<i>setosum</i> Lincoln & Boxshall, 1983		
<i>flexibilis</i> (Pasternak, 1982)	Mediterranean	2827-2829 [<i>Ananthura</i>]	Desmosomatidae Sars, 1897		
Leptanthuridae Poore, 2001			<i>Balbidocolon</i> Hessler, 1970a		
<i>Calathura</i> Norman & Stebbing, 1886			<i>atlanticum</i> Hessler, 1970a	N. Atlantic	4436-4749
<i>brachyata</i> (Stimpson, 1853)	Bay of Fundy	-2500 [<i>Anthura</i>]	<i>polare</i> Malyutina & Kussakin, 1996	Canadian Arctic	3550
<i>Leptanthurura</i> Sars, 1899			<i>Chelator</i> Hessler, 1970a		
<i>affinis</i> (Bonnier, 1896)	Gulf of Gascony	516-2185 [<i>Calathura</i>]	<i>insignis</i> (Hansen, 1916)	Davis Strait	1065-2702
					[<i>Desmosoma</i>]

Checklist continued

Taxa	Region	Depth [m]	Taxa	Region	Depth [m]
<i>verucundus</i> Hessler, 1970a	N. Atlantic	1150-2500	<i>Oeciidiobanchus</i> Hessler, 1970a	Arctic	794-3920
<i>vulgaris</i> Hessler, 1970a	N. Atlantic	2496-4833	<i>nanseni</i> Just, 1980		
<i>Cryodesma</i> Svavarsson, 1988			<i>Prochelator</i> Hessler, 1970a		
<i>agnart</i> Svavarsson, 1988	Norwegian Sea	970-3642	<i>abyssalis</i> Hessler, 1970a	N. Atlantic	3459-4833
<i>eryoabyssale</i> Malyuina & Kussakin, 1996	W Canadian Arctic	3290	<i>hampsoni</i> Hessler, 1970a	N. Atlantic	4680-4758
<i>Disparella</i> Hessler, 1970a			<i>incomitatus</i> Hessler, 1970a	N. Atlantic	5100
<i>pachyhris</i> Hessler, 1970a	N. Atlantic	4680	<i>lateralis</i> (Sars, 1899)	Skagerrak	50-2021
<i>valida</i> Hessler, 1970a	N. Atlantic	3459-3806	<i>litus</i> Hessler, 1970a	N. Atlantic	[<i>Eugerdia</i>]
<i>Eugerdia</i> Meinert, 1890			<i>sarsi</i> George, 2001	N. Atlantic, C.Hatteras	4680-4800
<i>arctica</i> Svavarsson, 1988			<i>Pseudogerdia</i> Kussakin, 1965		5474
<i>fulcimandibulata</i> Hessler, 1970a	Norwegian Sea	2400-2681	<i>intermedia</i> (Hult, 1936)	Norway	30-2258
<i>imbricata</i> Hessler, 1970a	N. Atlantic	587-4833	<i>Thaumasosoma</i> Hessler, 1970a		[<i>Desmosoma</i>]
<i>pannosa</i> Hessler, 1970a	N. Atlantic	4800-4825	<i>platycarpus</i> Hessler, 1970a		
<i>seifluxa</i> Hessler, 1970a	N. Atlantic	3742-4800	<i>tenuis</i> Hessler, 1970a	N. Atlantic	2886
<i>tetartia</i> Hessler, 1970a	N. Atlantic	2500	<i>Torvolia</i> Hessler, 1970a	N. Atlantic	2886-3753
<i>Eugerdella</i> Kussakin, 1965			<i>creper</i> Hessler, 1970a		
<i>coarctata</i> (G.O. Sars, 1899)	Skagerrak Strait	24-2702	<i>subchelatus</i> Hessler, 1970a	N. Atlantic	3753-5100
<i>cornuta</i> Hessler, 1970a	N. Atlantic	3834	<i>Whoia</i> Hessler, 1970a	N. Atlantic	2000-5100
<i>hessleri</i> Just, 1980	N. Polar Sea	800-3620	<i>angusta</i> (G.O. Sars, 1899)	Skagerrak	50-2500
<i>ischnomesoides</i> Hessler, 1970a	N. Atlantic	1150-4833	<i>dumbshagensis</i> Svavarsson, 1988	Northern Sea	[<i>Desmosoma</i>]
<i>longimana</i> (Vanhöffen, 1914)	Atlantic	2735	<i>variabilis</i> Hessler, 1970	N. Atlantic	1279-2024
<i>natator</i> (Hansen, 1916)	Davis Strait	[<i>Eugerdia</i>]	Eurycopidae Hansen, 1916		3753-4892
<i>minuta</i> Hessler, 1970a		2626-4833	<i>AcanthoCOPE</i> Beddard, 1885		
<i>palpata</i> Hessler, 1970a	N. Atlantic	4800	<i>armata</i> Chardy, 1972	N. Atlantic	2456
<i>plana</i> Hessler, 1970a	N. Atlantic	3834	<i>carinata</i> Chardy, 1972	N. Atlantic	3465
<i>similis</i> (Hansen, 1916)	Davis Strait	530-2194	<i>Amuletta</i> Wilson & Thistle, 1985		
		[<i>Desmosoma</i>]	<i>abyssorum</i> (Richardson, 1911a)	N.E. Atlantic	2379-4829
<i>Momedossa</i> Hessler, 1970a	N. Atlantic	4680-4833	[<i>Ilyarachna</i>]		
<i>profunda</i> Hessler, 1970a					

Checklist continued

Taxa	Region	Depth [m]	Taxa	Region	Depth [m]
<i>Bathyporus Nordenstam</i> , 1955			<i>producta</i> Sars, 1868	Norwegian Sea	72-2681
<i>abyssicolus</i> (Beddard, 1885)	W. Azores	3977	<i>pygmaea</i> Sars, 1870	W. Norway	150-280
<i>Bellibos (Bellibos)</i> Haugness & Hessler, 1979	NE & NW Atlantic	2379-4980	<i>quadratifrons</i> Birstein, 1969	Romanche Trench (N. Atlantic)	2022-2921
<i>buzwilsoni</i> Haugness & Hessler, 1979	NE & NW Atlantic	2379-4892	<i>sandersi</i> Wilson, 1983	Off New England	3550
<i>dagei</i> (Chardy, 1975a)	NE & NW Atlantic	[<i>Syneurycope</i>]	<i>septentrionalis</i> Malyutina & Kussakin, 1996	W. Canadian Arctic	3410
<i>Bellibos (Bemerria)</i> Haugness & Hessler, 1979	NE & NW Atlantic	2864-4270	<i>vasinae</i> Malyutina & Kussakin, 1996	W. Canadian Arctic	
<i>monticae</i> (Chardy, 1975a)	NE & NW Atlantic	[<i>Syneurycope</i>]	<i>Munneurycope</i> Stephensen, 1912		
<i>Belonectes</i> Wilson & Hessler, 1981	Bay of Biscay	460-4268	<i>elongata</i> Wolff, 1962	S. Davis Straits	3521
<i>parvus</i> (Bonnier, 1896)	Bay of Biscay	[<i>Eurycope</i>]	<i>incisa</i> (Gurjanova, 1946)	Arctic Ocean	1260-3709
<i>Betamorpha</i> Hessler & Thistle, 1975	N. W. Atlantic	2802-4426	<i>glacialis</i> Malyutina & Kussakin, 1996	Greenland, Amundsen Basin	[<i>Eurycope</i>]
<i>lasia</i> Thistle & Hessler, 1977	N. W. Atlantic		<i>murrayi</i> (Walker, 1903)	W. Canadian Arctic	2370-2750
<i>Disconectes</i> Wilson & Hessler, 1981	Northern Sea	3110-3410	<i>nodifrons</i> (Hansen, 1916)	N. Atlantic	530-7800
<i>coxalis</i> Kussakin, 1983	Lofoten Is.	150-2258			[<i>Munneopsis</i>]
<i>furecatus</i> (Sars, 1870)		[<i>Eurycope</i>]	<i>Munneopsis</i> Richardson, 1912	Davis Strait	640-2702
<i>Eurycope</i> Sars, 1864	Norwegian Sea	160-3423	<i>longipes</i> (Tattersall, 1905)	Off Nantucket Shoals	2258-2702
<i>brevirostris</i> Hansen, 1916	Off N. Britain	1495-2815	<i>Stordyngura</i> Vanhöffen, 1914	Off Martha's Vineyard	[<i>Eurycope</i>]
<i>centebi</i> Wilson, 1983	Bay of Biscay	860-5779	<i>magnispinis</i> (Richardson, 1908a)		2788-3235
<i>complanata</i> Bonnier, 1896	Norwegian Sea	46-2207	<i>truncata</i> (Richardson, 1908a)	N. W. Atlantic	[<i>Eurycope</i>]
<i>cornuta</i> Sars, 1864	Norwegian Sea	2085-3709	<i>venae</i> Menzies, 1962	Romanche Trench (N. Atlantic)	5166
<i>cryoabyssalis</i> Just, 1980	N. W. Atlantic	3300-3970	<i>zenkevitchi</i> Birstein, 1969		
<i>dahli</i> Svavarsson, 1987	Norwegian Sea	2085-3709	<i>Syneurycope</i> Hansen, 1916		
<i>diadela</i> Wilson, 1983	Off New England	3310-3806	<i>dagei</i> Chardy, 1975	N. Atlantic, France	2835
<i>errabunda</i> Wilson, 1983	N. Atlantic	4632-5280	<i>hanseni</i> Menzies, 1956	N. Atlantic	5104-5122
<i>grasstei</i> Wilson, 1983	Off New England	2086-2891	<i>parallala</i> Hansen, 1916	S. W. Cape Farewell	1280-5122
<i>hanseni</i> Ohlin, 1901	N. W. Atlantic	460-3709			
<i>hessleri</i> Wilson, 1983	N. E. Atlantic	4400	Haplomiscidae Hansen, 1916		
<i>inermis</i> Hansen, 1916	N. W. Atlantic	200-2380	<i>Antennulomiscus</i> Menzies, 1962		
<i>iphithima</i> Wilson, 1981	N. E. Atlantic	2379-4975	<i>dilatatus</i> Chardy, 1974	N. Atlantic	3663
<i>laticuneata</i> Pasternak, 1982	Mediterranean	3630-3650	<i>diversus</i> Lincoln, 1985	N. E. Atlantic	1942-2760
<i>longiflagrata</i> Wilson, 1983	Off New England	2178-2469			

Taxa	Region	Depth [m]	Taxa	Region	Depth [m]
<i>lincolni</i> George, 2004	N. Atlantic, Carolina	4100-4180	<i>Ilyarachna</i> Sars, 1870	Mediterranean	3630-3650
<i>menziesi</i> George, 2004	N. Atlantic, Carolina	3010-3080	<i>calva</i> Pasternak, 1982	Arctic Ocean	1666-3270
<i>Chandraniscus</i> George, 2004			<i>dubia</i> Hansen, 1916	Arctic Ocean	2500
<i>eastwardae</i> George, 2004	N. Atlantic, Carolina	3045	<i>derjugini</i> Gurjanova, 1946	Arctic	3965
<i>costlowi</i> George, 2004	N. Atlantic, Carolina	2500-2560	<i>frami</i> Just, 1980	Lofoten Is.	20-3270
<i>chardyi</i> George, 2004	N. Atlantic, Carolina	2595-2610	<i>hirticeps</i> Sars, 1870	Christiana Fjord	8-5223
<i>negoescaae</i> George, 2004	N. Atlantic, Carolina	4910-4930	<i>longicornis</i> (Sars, 1864)	[<i>Mesosstenus</i>]	
<i>Chautilodonicus</i> Lincoln, 1985			<i>polita</i> Bonnier, 1896	Bay of Biscay	216-4885
<i>wilsoni</i> George, 2004	N. Atlantic, Carolina	5080-5100	<i>spinosissima</i> Hansen, 1916	Davis Strait	2702-3521
<i>Haploniciscus</i> Richardson, 1908			<i>una</i> Thistle, 1980	N.W. Atlantic	2178-4892
<i>aduncus</i> Lincoln, 1985	N.E. Atlantic	2636-2646	Ischnomesitidae Hansen, 1916		
<i>ampliatius</i> Lincoln, 1985	N.E. Atlantic	2636-2925	<i>Haplomesus</i> Richardson, 1908c		
<i>angustus</i> Lincoln, 1985	N.E. Atlantic	1484-2910	<i>angustus</i> Hansen, 1916	Denmark Strait	698-2137
<i>bicuspis bicuspis</i> (Sars, 1877)	W. of Norway	698-5024	<i>bicuspis</i> (Sars, 1877)	N. Atlantic	360-2465
<i>charcoti</i> Chardy, 1975	N.E. of Azores	3360-3600	[<i>Nannoniscus</i>]		
<i>foresti</i> Chardy, 1974	N. Atlantic	1632-3697	<i>gorbunovi</i> Gurjanova, 1946	Davis Strait	698-3011
<i>furcatus</i> Chardy, 1974	N. Atlantic	2273-3025	<i>insignis insignis</i> Hansen, 1916	Davis Strait	698-5494
<i>hamatus</i> Lincoln, 1985	N.E. Atlantic	900-2925	<i>modestus</i> Hansen, 1916	Davis Strait	2258
<i>harrietae</i> George, 2004	N. Atlantic, Carolina	3000	<i>ornatus</i> Menzies, 1962	Davis Strait	4060-5293
<i>ingolff</i> Wolff, 1962	Arctic	854-2465	<i>quadrispinosus</i> (Sars, 1879)	Norwegian Sea	510-4150
<i>monodi</i> Chardy, 1974	N. Atlantic	4223	<i>tenuispinus</i> Hansen, 1916	Davis Strait	698-3474
<i>myrtamae</i> Chardy, 1974	N. Atlantic	4184	<i>tropicalis</i> Menzies 1962	Mediterranean	4071
<i>obtusifrons</i> Chardy, 1974	N. Atlantic	3663	<i>Heteromesus</i> Richardson, 1908c		
<i>spinifer</i> Hansen, 1916	N.W. Atlantic	1505-4061	<i>frigidus</i> Hansen, 1916	Norwegian Sea	698-2104
<i>Hydroniscus</i> Hansen, 1916			<i>ongiremus</i> Hansen, 1916	Davis Strait	698-2702
<i>abyssi</i> Hansen, 1916	N. Atlantic	3521	<i>similis</i> Richardson, 1911	N.E. of Azores	2995
<i>malyninae</i> George, 2004	N. Atlantic, Carolina	3100-3155	<i>olffi</i> Chardy, 1974	N. Atlantic	3178-3663
<i>vandeli</i> Chardy, 1974	N. Atlantic	3663	<i>Ischnomesus</i> Richardson, 1908c		
<i>watlingi</i> George, 2004	N. Atlantic, Carolina	5050-5080	<i>rmatus</i> Hansen, 1916	Davis Strait	2702-5497
Ilyarachnidae Hansen, 1916			<i>chardy</i> Kussakin, 1988		178
<i>Belamorpha</i> Hessler & Thistle, 1975			<i>gracilis</i> Chardy, 1974	N. Atlantic	3178
<i>lasia</i> Thistle & Hessler, 1977	N.W. Atlantic	2802-4426	<i>norvegicus</i> Svavarsson, 1984	Norwegian Sea	2681
			<i>profundus</i> Hansen, 1916	Davis Strait	3521

Checklist continued

Checklist continued	Region	Depth [m]	Taxa	Region	Depth [m]
<i>Rapana</i> Siebenaller & Hessler, 1981 <i>crassipes</i> (Hansen, 1916)	N. Norway	219-2754 [<i>Nannoniscus</i>] 1254-2223	Suborder CYMOTHOIDA Wägele, 1989		
<i>dewdneyi</i> Siebenaller & Hessler, 1981	N.W. Atlantic		Cirolanidae Dana, 1852		
<i>Regabellator</i> Siebenaller & Hessler, 1981 <i>armatus</i> (Hansen, 1916)	Davis Strait	3521	<i>Metacirolana</i> Nierstrasz, 1931 <i>caeca</i> (Dollfus, 1903)	Mediterranean	1210-2500 [<i>Cirolana</i>]
<i>Thaumastasoma</i> Hessler, 1970A <i>platycarpus</i> Hessler, 1970 <i>tenue</i>	N.W. Atlantic N.W. Atlantic	2886 2886-3753	Gnathiidae Harger, 1880		
Pseudomesidae Hansen, 1916			<i>Bathynathia</i> Dollfus, 1901 <i>caeca</i> Richardson, 1911 <i>depaolorosae</i> George, 2003	N. Atlantic N. Atlantic, Carolina	2638 2060-2165
<i>Pseudomesus</i> Hansen, 1916 <i>bispinosus</i> Chardy, 1974 <i>brevicornis</i> Hansen, 1916	W. Mediterranean N. Iceland	2827 80-2105	Suborder VALVIFERA Sars, 1882		
Santidae Kussakin, 1988			Arcturidae Bate & Westwood, 1868		
<i>Abyssianira</i> Menzies, 1956 <i>dentifrons</i> Menzies, 1956	N. Atlantic	5104-5122	<i>Astacilla</i> Cordiner, 1793 <i>caeca</i> Benedict, 1898	Martha's Vineyard	2790-3340
Stenetriidae Hansen, 1905			Chaetiliidae Dana, 1853		
<i>Stenetrium</i> Haswell, 1881 <i>acutum</i> Vanhöffen, 1914	Davis Sea	150-3397	<i>Saduria</i> Adams, 1852 <i>megabura</i> (Sars, 1879)	N. Atlantic	1996-2465
Thambematidae Stebbing, 1912			[genus name of first description]		
<i>Thambema</i> Stebbing, 1912 <i>amicorum</i> Stebbing, 1912	W. of Ireland	1993-2912			

R e m a r k s. – The most diverse families of Isopoda of the North Atlantic are the Desmosomatidae, including 14 genera and 49 species, and the Eurycopidae represented by 13 genera and 46 species. Some families have only been reported with a single genus or a single species in this area: Acanthaspidiidae, Santiidae, Stenetriidae, Thambematidae, Cirolanidae, Arcturidae and Chaetiliidae (see list). *Munneurycope murrayi* (WALKER 1903) does not only occur at greatest depth in the North Atlantic, it is also the species with the most eurybathic range (530-7800 m), definitely worth revising the material and check, as this species might have been misidentified in some samples, alternatively, the material might belong to more than one species of *Munneurycope*.

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References

- ADAMS, A. 1852. Zoology. – Pp. 201-216 in SUTHERLAND, P.C. (ed.). – Journal of a voyage in Baffin's Bay and Barrow Straits, in the years 1850-1851 performed by H.M. ships "Lady Franklin" and "Sophia", under the command of Mr. William Penny, in search of the missing crews of H.M. ships "Erebus" and "Terror": with ... observations on the natural history and physical features of the countries and frozen seas visited. Vol. 2. – Longman Group Ltd: London.
- BARNARD, K. H. 1925. A revision of the family Anthuridae (Crustacea, Isopoda), with remarks on certain morphological peculiarities. – Zool. J. Linn. Soc. 36: 109-160.
- BATE, C. S. & WESTWOOD, J. O. 1868. A history of the British sessile-eyed Crustacea. Vol. 2. – John Van Voorst: London. 536 pp.
- BEDDARD, F. E. 1885. Preliminary notice of the Isopoda collected during the voyage of H.M.S. 'Challenger.' - Part II. Munnopsidae. – Proc. Zool. Soc. Lond. 1885: 916-925.
- BENEDICT, J. E. 1898. The Arcturidae in the U.S. National Museum. – Proc. Biol. Soc. Wash. 12: 41-51.
- BIRSTEIN, J. A. 1957. Certain peculiarities of the ultra-abyssal fauna with the example of the genus *Storhyngura*. – Zool. Zh., Moscow 36: 961-985.
- BIRSTEIN, J. A. 1969. Crustacea Isopoda from the Romanche Trench. – Byull. MOIP. Biol. 74: 50-59.
- BIRSTEIN, J. A. 1970. Additions to the fauna of Isopods (Crustacea, Isopoda) of the Kurile-Kamchatka Trench. Part I. – Acad. Scienc. USSR, P.P. Shirshov Institute of Oceanology, Moscow 86 (Fauna of the Kurile-Kamchatka Trench and its Environment): 292-340.
- BONNIER, J. 1896. Résultats Scientifiques de la Campagne du "Caudan" dans le Golfe de Gascogne - Août-septembre 1895 - Édriophthalmes. – Ann. Univ. Lyon: 527-689.
- BRANDT, A. 1997. Abundance, diversity, and community patterns of epi- and benthic-boundary layer Crustacea Peracarida at 75°N of East Greenland. – Polar Biol. 17: 159-174.
- CHARDY, P. 1972. *Janirella priseri* sp. n. isopode abyssal de l'Atlantique nord. – Crustac. Suppl. 3: 11-18.
- CHARDY, P. 1974a. Compléments à l'étude systématique des Ishnomesidae (Isopodes Asellotes) de l'Atlantique. Description de quatre espèces nouvelles. – Bull. Mens. Soc. Linn. Lyon. (3) 179: 1537-1552.
- CHARDY, P. 1974b. Deux espèces nouvelles d'Isopodes Asellotes recoltées en Méditerranée profonde. – Vie Milieu (B) 24: 409-420.
- CHARDY, P. 1974c. Deux nouveaux isopodes abyssaux de l'Atlantique nord appartenant au genre *Janirella* Bonnier, 1885. – Crustac. 26: 172-178.

- CHARDY, P. 1974d. Les Haploniscidae (Crustacés Isopodes Asellotes) de l'Atlantique. Description du huit espèces nouvelles. – Bull. Mens. Soc. Linn. Lyon. (3) 167: 1137-1166.
- CHARDY, P. 1975a. Isopodes nouveaux des campagnes 'Biacores' et 'Biogas IV' en Atlantique Nord. – Bull. Mens. Soc. Linn. Lyon. (3) 303: 689-708.
- CHARDY, P. 1975b. *Paramunna foliacea* sp. n., isopode abyssal de l'Atlantique tropical. – Crustac. 28: 286-290.
- CORDINER, C. 1793. Remarkable ruins, and romantic prospects, of North Britain. With ancient monuments, and singular subjects of natural history. – London. Peter Mazell.
- DANA, J.D. 1853. Crustacea. Part II. United States Exploring Expedition during the years 1838, 1839, 1840, 1841, 1842 under the command of Charles Wilkes, – U.S.N. 13: 691-1618.
- DOLLFUS, A. 1901. Étude préliminaire des Gnathiidae recueillis dans les campagnes de 'L'Hirondelle' et de 'La Princesse-Alice'. – Bull. Soc. Zool. France. 26: 239-246.
- GEORGE, R. Y. 2001. Desmosomatidae and Nannoniscidae (Crustacea, Isopoda, Asellota) from bathyal and abyssal depths off North Carolina and their evolution. – J. Nat. Hist. 35: 1831-1859.
- GEORGE, R. Y. 2003. Two new species of gnathiid isopod Crustacea from the north Carolina coast. – J. North Carolina Acad. Scienc. 119 (2): 33-40.
- GEORGE, R. Y. 2004. Deep-sea asellote isopods (Crustacea, Eumalacostraca) of the north-west Atlantic: The family Haploniscidae. – J. Nat. Hist. 38: 337-373.
- GURJANOVA, E. F. 1946. [New species of Isopoda and Amphipoda from the Arctic Ocean. Compendium of results of Drifting Expedition of Ice-breaker 'Cedov' 1937-1940]. Vol. 3: 272-297. – Moscow. Chief Office of Northroad. (in Russian)
- HANSEN, H. J. 1895. Isopoden, Cumaceen und Stomatopoden der Plankton Expedition. – Ergebn. Plankton-Exped. Humboldt-Stiftung Atlant. Ozean. 1889, 2: 1-105.
- HANSEN, H. J. 1905. On the morphology and classification of the Asellota - group of crustaceans, with descriptions of the genus *Stenetrium* Hasw. and its species. – Proc. Zool. Soc. Lond. 1904: 302-331.
- HANSEN, H. J. 1916. Crustacea Malacostraca III: V. The Order Isopoda. – Danish Ingolf-Exped. 3: 1-262.
- HARGER, O. 1880. Report on the marine Isopoda from New England and adjacent waters. – Rep. U. S. Comm. of Fish and Fisheries 6: 297-462.
- HASWELL, W. A. 1881. On some new Australian marine Isopoda - Part I. – Proc. Linn. Soc. N. S. W. 5: 470-481.
- HAUGSNES, J. A. & HESSLER, R. R. 1979. A revision of the subfamily Syneurycopinae (Isopoda: Asellota: Eurycopidae) with a new genus and species (*Bellibos buzwilsoni*). – Trans. San Diego Soc. Nat. Hist. 19: 121-151.
- HESSLER, R. R. 1970a. The Desmosomatidae (Isopoda, Asellota) of the Gay Head-Bermuda Transsect. – Bull. Scripps Inst. Oceanogr. 15: 1-185.
- HESSLER, R. R. 1970b. High-latitude emergence of deep-sea isopods. – Antarc. J. U. S. 5: 133-134.
- HULT, J. 1936. On some species and genera of Parasellidae. – Ark. Zool. Uppsala. 29A (6): 1-14.
- JUST, J. 1970. Decapoda, Mysidacea, Isopoda, and Tanaidacea from Jørgen Brønlund Fjord, North Greenland. – Medd. Grønland 184: 1-32.
- JUST, J. 1980a. Abyssal and deep bathyal malacostraca (Crustacea) from the Polar sea. – Vidensk. Medd. Dan. Nat.hist. Foren. Kjøbenhavn 142: 161-177.
- JUST, J. 1980b. Polar sea abyssal and deep bathyal Isopoda (Crustacea). – Steenstrupia 6: 197-230.
- KENSLEY, B. 1982. Deep-water Atlantic Anthuridea (Crustacea: Isopoda). – Smithsonian Contr. Zool. 346: 1-60.
- KUSSAKIN, O. G. 1965. On the fauna of the Desmosomatidae (Crustacea, Isopoda) of the Far-Eastern seas of the USSR. – Issledovanija dal'nevostocnyja morej SSSR (Exploration of the Far-Eastern Seas of the USSR) 3: 115-144.
- KUSSAKIN, O. G. 1983. The first isopod species from the abyssal of the Canada Basin of the Polar Sea. – Biol. Mor., Vladivostok 1983: 13-17.

- KUSSAKIN, O. G. 1988. Marine and brackish-water Crustacea (Isopoda) of cold and temperate waters of the Northern Hemisphere. 3. Suborder Asellota 1. Janiridae, Santiidae, Dendrotonidae, Munnidae, Haplomunnidae, Mesosignidae, Haploniscidae, Mictosomatidae, Ischnomesidae. – *Opred. Faune SSSR* 152: 1-501 (in Russian).
- LATREILLE, P. A. 1803. Histoire naturelle, générale et particulière, des Crustacés et des Insectes. Ouvrage faisant suite aux oeuvres de Leclerc de Buffon, et partie du cours complet d'histoire naturelle rédigé par C.S. Sonnini. Vol. 5. Paris, Dufart.
- LEACH, W. E. 1814. Crustaceology. – *Brewster's Edinburgh Encyclopedia* 7: 383-437, pl. 221.
- LINCOLN, R. J. 1985. Deep-sea asellote isopods of the north-east Atlantic: the family Haploniscidae. – *J. Nat. Hist.* 19: 655-695.
- LINCOLN, R. J. & BOXSHALL, G. A. 1983. Deep-sea asellote isopods of the north-east Atlantic: the family Dendrotonidae and some new ectoparasitic copepods. – *Zool. J. Linn. Soc.* 79: 297-318.
- MALYUTINA, M. U. & KUSSAKIN, O. G. 1996. Additions to the Polar Sea bathyal and abyssal Isopoda (Crustacea: Malacostraca). Part 2 Asellota, Desmosomatidae. – *Zoosyst. Rossica* 1996: 239-260.
- MALYUTINA, M. U. & KUSSAKIN, O. G. 1996. Additions to the Polar Sea bathyal and abyssal Isopoda (Crustacea: Malacostraca). Part 3 Asellota: Munnopsidae. – *Zoosyst. Rossica* 5 (1): 13-27.
- MEINERT, F. 1890. Crustacea Malacostraca af Kanonbaad. Videnskabelige Udbytte af Kanonbaaden. – *'Hauchs Togter'* 3: 147-230.
- MENZIES, R. J. 1951. Notes on the structure of the marine asellote isopod *Ianiropsis breviremis* G.O. Sars. – *Medd. Zool. Mus. Oslo* 57: 153-155.
- MENZIES, R. J. 1956a. New abyssal tropical Atlantic isopods with observations on their biology. – *Am. Mus. Novitates*. 1798: 1-16.
- MENZIES, R. J. 1956b. New bathyal Isopoda from the Caribbean with observations on their nutrition. – *Breviora* 63: 1-10.
- MENZIES, R. J. 1962. The isopods of abyssal depths in the Atlantic Ocean. – *Vema Res. Ser.* 1: 79-206.
- MENZIES, R. J. & GLYNN, P. W. 1968. Studies on the fauna of Curaçao and other Caribbean Islands No. 27. The common marine isopod Crustacea of Puerto Rico. A handbook for marine biologists. Uitgaven van de Natuurwetenschappelijke voor Suriname en der Nederlandse Antillen 51: 1-133.
- MENZIES, R. J. & MOHR, J. L. 1962. Benthic Tanaidacea and Isopoda from the Alaskan Arctic and the Polar Basin. – *Crustaceana* 3: 192-202.
- MEZHOV, B. V. 1999. Few new species of the genus *Macrostylis* (Crustacea, Isopoda, Macrostylidae) from the Atlantic Ocean abyssal zone. – *Zool. Zh.* 78 (12): 1417-1423.
- NEGOESCU, I. 1992. *Leptanthura chardyi* n. sp. (Isopoda, Anthuridea, Paranthuridae) of the Atlantic Ocean. – *Trav. Mus. Hist. Nat. "Grigore Antipa"*. 32: 263-266.
- NIERSTRASZ, H. F. 1931. Die Isopoden der Siboga-Expeditie. III. Isopoda Genuina. II. Flabellifera. – *Siboga Expéd.* 32: 123-233.
- NORDENSTAM, A. 1955. A new isopod from the deep sea. – *Rep. Swedish Deep-Sea Exped.*, 1947-1948 2: 205-212.
- NORMAN, A. M. & STEBBING, T. R. R. 1886. On the Crustacea of the 'Lighting', 'Porcupine' and 'Valorous' Expeditions. – *Trans. Zool. Soc. Lond.* 12: 77-141.
- OHLIN, A. 1901. Arctic Crustacea collected during the Swedish Arctic expeditions 1898 and 1899 under the direction of Professor A.G. Nathorst. I. Leptostraca, Isopoda, Cumacea. – *Bih. Kungl. Svenska Vetensk.-Akad. Handl.* 26: 1-54.
- PASTERNAK, F. A. 1982. Composition, origin and peculiarities of distribution of the Mediterranean deep-sea isopod fauna. – *Tr. Inst. Okean., Akad. Nauk SSSR, Moscow* 117: 163-177.
- POORE, G. C. B. 2001. Families and genera of Isopoda Anthuridea. – *Crustacean Issues* 13: 63-173.
- POORE, G. C. B. & LEW TON, H. M. 1988. Antheluridae, a new family of Crustacea (Isopoda: Anthuridea) with new species from Australia. – *J. Nat. Hist.* 22: 489-506.
- RICHARDSON, H. 1908a. Description of a new isopod of the genus *Eurycope* from Martha's Vineyard. – *Proc. U. S. natn. Mus.* 34: 67-68.

- RICHARDSON, H. 1908b. The parasitic isopod *Leidyia distorta* (Leidy) found on a new host. – Proc. U. S. natn. Mus. 34: 23-26.
- RICHARDSON, H. 1908c. Some new isopoda of the superfamily Aselloidea from the Atlantic coast of North America. – Proc. U. S. natn. Mus. 35: 71-86.
- RICHARDSON, H. 1908d. Some new isopods of the family Gnathiidae from the Atlantic coast of North America. – Bull. U. S. natn. Mus. 35: 483-488.
- RICHARDSON, H. 1911a. Les crustacés isopodes du Travailleur et du Talisman: formes nouvelles. – Bull. Mens. Soc. Linn. Lyon 7: 518-534.
- RICHARDSON, H. 1911b. Description of a new species of *Aega* from the Atlantic coast of the United States. – Proc. U. S. natn. Mus. 40: 623-624.
- RICHARDSON, H. 1912. *Munnopsurus arcticus* (n. g.; n. sp.). Description d'un nouveau genre d'isopode appartenant à la famille des Munnopsidae de la Nouvelle-Zemble. – Bull. Inst. Océanogr. Monaco 227: 1-7.
- SARS, G. O. 1864. Om en anomal Gruppe af Isopoder. – Forh. VidenskSelsk. Kristiania 1863: 205-221.
- SARS, G. O. 1869. Undersøgelser over Christianiafjordens Dybvandsfauna anstilleden paa en i Sommeren 1868 foretagen zoologisk Reise. – Nyt Mag. Naturvidensk., Christiania 1869: 1-58.
- SARS, G. O. 1870. Nye Dybuandscrustaceer fra Lofoten. – Forh. VidenskSelsk. Kristiania 1869: 145-286.
- SARS, G. O. 1872a. Bidrag til Kundskaben om Dyrelivet paa vore Havbanker. – Forh. VidenskSelsk. Kristiania 1872: 73-119.
- SARS, G. O. 1872b. Underøgelser over Hardengerfjordens Fauna. I. Crustacea. – Forh. VidenskSelsk. Kristiania 1871: 245-286.
- SARS, G. O. 1877. Prodrum descriptionis crustaceorum et pycnogonidarum, quae in expeditione norvegica anno 1876 observavit. – Arch. Mathem. Naturv. 2: 337-371.
- SARS, G. O. 1879. Crustacea et Pycnogonida nova in itinere 2-do et 3-tio Expeditionis norvegicae anno 1877 et 78 collecta. – Arch. Mathem. Naturv. 4: 427-476.
- SARS, G. O. 1882. Oversigt af Norges Crustaceer med forløbige Bemaerkninger over de nye eller mindre bekjendte Arter. – Forh. VidenskSelsk. Kristiania 1882: 1-124.
- SARS, G. O. 1897a. Parts 3, 4. Anthuridae, Gnathiidae, Aegidae, Cirolanidae, Limnoriidae. in: [An account of the Crustacea of Norway with short descriptions and figures of all the species. Vol. 2 Isopoda.] – Bergens Museum: Bergen: Pp. 41-80, pls 17-32.
- SARS, G. O. 1897b. Parts 5, 6. Idotheidae, Arcturidae, Asellidae, Ianiridae, Munnidae. in: [An account of the Crustacea of Norway with short descriptions and figures of all the species. Vol. 2 Isopoda.] – Bergens Museum: Bergen: Pp. 81-116, pls 33-48.
- SARS, G. O. 1897c. Parts 7, 8. Desmosomidae, Munnopsidae (part). in: [An account of the Crustacea of Norway with short descriptions and figures of all the species. Vol. 2 Isopoda.] – Bergens Museum: Bergen: Pp. 117-144, pls 49-64.
- SARS, G. O. 1899. Parts 13, 14. Cryptoniscidae, Appendix. in: [An account of the Crustacea of Norway with short descriptions and figures of all the species. Vol. 2 Isopoda.] – Bergens Museum: Bergen.: Pp. 233-270.
- SARS, M. 1868. Bidrag til Kundskab om Christianiafjordens Fauna. – Nyt Mag. Naturvidensk., Christiania 15: 218-322.
- SIEBENALLER, J. & HESSLER, R. R. 1977. The Nannoniscidae (Isopoda, Asellota): *Hebefustis* n. gen. and *Nannoniscoides* Hansen. – Trans. San Diego Soc. Nat. Hist. 19: 17-43.
- SIEBENALLER, J. & HESSLER, R. R. 1981. The genera of the Nannoniscidae (Isopoda, Asellota). – Trans. San Diego Soc. Nat. Hist. 19: 227-250.
- STEBBING, T. R. R. 1898. The Karkinokosm, or World of Crustacea. – Knowledge 22: 29-285.
- STEBBING, T. R. R. 1900. Arctic Crustacea: Bruce collection. – Ann. Mag. Nat. Hist. (7) 5: 1-16.
- STEBBING, T. R. R. 1913. On the Crustacea Isopoda of the 'Porcupine' Expedition. – Trans. Zool. Soc. London 20: 231-246.
- STEPHENSON, K. 1912. Report on the Malacostraca, Pycnogonida and some Entomostraca collected by the Denmark Expedition to northeast Greenland. – Medd. Grønland 45: 501-630.
- STIMPSON, W. M. 1853. Synopsis of the marine Invertebrata of Grand Manan: or the region about the mouth of the Bay of Fundy, New Brunswick. – Smithson. Contr. Knowledge 6: 1-66.

- SVAVARSSON, J. 1982. *Nannoniscus profundus* sp. n. and *Austroniscus norbi* sp. n. (Isopoda, Asellota, nannoniscidae) from the deep Norwegian Sea. – *Sarsia* 67: 179-186.
- SVAVARSSON, J. 1984. Ischnomesidae (Isopoda, Asellota) from bathyal and abyssal depths in the Norwegian and North Polar Seas. – *Sarsia* 69: 25-36.
- SVAVARSSON, J. 1988a. Bathyal and abyssal Asellota (Crustacea, Isopoda) from the Norwegian, Greenland, and North Polar Seas. – *Sarsia* 73: 83-106.
- SVAVARSSON, J. 1988b. Desmosomatidae (Isopoda, Asellota) from bathyal and abyssal depths in the Norwegian, Greenland, and North Polar Seas. – *Sarsia* 73: 1-32.
- SVAVARSSON, J. 1993. The deep-sea asellote (Isopoda, Crustacea) fauna of the Northern Seas: species composition, distributional patterns and origin. – *J. Biogeogr.* 20: 537-555.
- TATTERSALL, W. M. 1905. Some new and rare Isopoda taken in the British area. – Report of the British Association for the Advancement of Science, 74th Meeting at Cambridge, August 1904, Transactions of Section D: 601-602.
- THISTLE, D. 1980. A revision of *Ilyarachna* (Crustacea, Isopoda) in the Atlantic with four new species. – *J. Nat. Hist.* 14: 111-143.
- THISTLE, D. & HESSLER, R. R. 1977. A revision of *Betamorpha* (Isopoda; Asellota) in the world ocean with three new species. – *Zool. J. Linn. Soc.* 60: 275-295.
- VANHÖFFEN, E. 1914. Die Isopoden der Deutschen Südpolar-Expedition 1901-1903. – *Deutsche Südpolar-Expedition, 1901-03* 15: 449-598.
- WALKER, A. O. 1903. Report on the Isopoda and Amphipoda collected by Mr. George Murray, F.R.S., during the cruiser of the „Oceana“ in November 1898. – *Ann. Mag. Nat. Hist.* (7) 12: 223-233.
- WÄGELE, J. W. 1981C. Zur Phylogenie der Anthuridea (Crustacea, Isopoda). Mit Beiträgen zur Lebensweise, Morphologie, Anatomie und Taxonomie. – *Zoologica* 132: 1-127.
- WÄGELE, J. W. 1989. Evolution und phylogenetisches System der Isopoda. – *Zoologica* 140: 1-262.
- WILSON, G. D. F. 1981. Taxonomy and postmarsupial development of a dominant deep-sea eurycopid isopod (Crustacea). – *Proc. Biol. Soc. Wash.* 94: 276-294.
- WILSON, G. 1983. An unusual species complex in the genus *Eurycope* (Crustacea: Isopoda: Asellota) from the deep North Atlantic Ocean. – *Proc. Biol. Soc. Wash.* 96: 452-467.
- WILSON, G. D. F. 1989. A systematic revision of the deep-sea subfamily Lipomerinae of the isopod crustacean family Munnopsidae. – *Bull. Scripps Inst. Oceanogr.* 27: i-xiii, 1-138.
- WILSON, G. & HESSLER, R. R. 1981. A revision of the genus *Eurycope* (Isopoda, Asellota) with descriptions of three new genera. – *J. Crust. Biol.* 1: 401-423.
- WILSON, G. D. F., & THISTLE, D. 1985. *Amuletta*, new genus for *Ilyarachna abyssorum* Richardson, 1911 (Isopoda: Asellota: Eurycopidae). – *J. Crust. Biol.* 5 (2): 350-360.
- WOLFF, T. 1956. Isopoda from depths exceeding 6000 m. – *Galathea Rep.* 2: 85-157.
- WOLFF, T. 1962. The systematics and biology of bathyal and abyssal Isopoda Asellota. – *Galathea Rep.* 6: 1-320.

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