

Ichthyosauromorph taxonomy

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Introduction

This document presents a list of valid ichthyosauromorph species. It is a constant work in progress given the pace at which new ichthyosaur research happens. Perhaps not as rapidly as some other fossil groups, but certainly fast enough to require some attention. It’s also intended to give some handle on the vast literature available for ichthyosaurs and their near relatives by means of synonymy lists. I’ve chosen this format for it’s familiarity, but also because I rather enjoy the process and trials to building a complete yet usable synonymy list. I’ve used this also as an exercise in typography – like much of my more public output. This document is typeset in Lua¹TeX using typefaces with various nice features – old style figures, small capitals, optical sizes. The fonts used are nonetheless open source, courtesy of their development at Adobe.

Layout of synonymy lists

The synonymy lists are presented as unruled tables:

Cartorhynchus lenticarpus Motani et al.,2015				
URN:LSID:ZOOBANK.ORG:ACT:FCCC9BB7-FD52-42F4-B2EC-B0B7E2A1CA32				
<status>	<year>	<Taxon>	<Authority, Year>	<reference, page> [<occurrence information>.] <comments>
	2015	Cartorhynchus lenticarpus	Motani et al.,2015	Motani et al. p 485 [Upper Member, Nanlinghu Formation, Subcolumbites Ammonite Biozone (Olenekian, Lower Triassic, Triassic); Majishan Quarry, Chaohu City, Hefei, China (UTM WGS84 50R 577953 3499041 = 31° 37' 26" N 117° 49' 19" E).] LSID: URN:LSID:ZOOBANK.ORG:PUB:9CFFEE63-2B8A-4C01-B9C7-CD3C53D684F5
				

If a work names a new species or combination, the LSID of the act is included as a link button alongside the taxon name,¹ where this is available. Similarly all works that have publication LSIDs have those included too.

¹ i.e.



‘Richter symbols’ & certainty of assignment

I’ve followed the recommendations of Matthews (1973), pretty much to the letter, for the symbols and styles included in the leftmost two columns.

In front of the year * (asterisk) this publication marks the name becoming valid under ICZN rules.

. (dot/period) we accept responsibility for attaching this reference to the taxon in question.

(no sign) we cannot responsibly attach this reference, but do not doubt it.

? (question mark) there is some doubt in attaching this reference to the current taxon.

v *vidimus*, we have checked the deposited specimens. Can be accompanied by the above tokens:

*v** we have seen the type specimen(s).

v. we take responsibility for attaching the deposited specimens.

v we do not take responsibility for attaching the deposited specimens.

v? the specimens cannot be certainly assigned to this taxon.

(?) the year of publication is uncertain.

p only part of the deposited specimens can be assigned to the current taxon.

vp the deposited specimens have been checked and only part of them belong to this taxon.

And by formatting the year 1881 (italicised) this work does not add morphological information, only occurrence information.

1881 (upright) the work adds to our knowledge on this taxon.

(1881) (parentheses surrounding the year) the date of this work is uncertain.

Life Science Identifiers (LSID)

*Life science identifiers*² are unique keys to identify and locate information important to the various life sciences. Relevant to this document are the identifiers used to link nomenclatural acts in *ZooBank*,³ the official registry of the International Commission on Zoological Nomenclature (ICZN). Naming new taxa in the recent literature requires registering the act in ZooBank to be ‘officially’ recognised.⁴

Many of the taxa included herein were named before ZooBank was yet a glint in anyone’s eye, although they may well have been included in the printed equivalent *Zoological Record*. I’ve registered several new publications and acts where these were not in ZooBank before, that may be used henceforth. At the moment, these include only the original naming of species, not new combinations of specific and generic names.

Links in this document

The L^AT_EX document from which this PDF is compiled includes the *hyperref* package to provide links within the document⁵ and to other references on the web.⁶ These have different colours, as follows:

² <https://en.wikipedia.org/wiki/LSID>

³ <http://zoobank.org>

⁴ <https://www.iczn.org/the-code/the-international-code-of-zoological-nomenclature-the-code-online/> (Article 8.5.3); <https://en.wikipedia.org/wiki/ZooBank>

⁵ e.g. citations and sections

⁶ e.g. LSIDs and DOIs

Citation links from the year of a citation to its reference in the bibliography.

URL often web links, particularly to websites, DOI links, LSID with the address fully written.

LSID link to a ZooBank LSID for an act.

ListofSpecies

<i>Acamptonectes densus</i>	4	<i>Ichthyosaurus breviceps</i>	7	<i>Protoichthyosaurus prostaxalis</i>	9
<i>Aegirosaurus leptospondylus</i>	4	<i>Ichthyosaurus communis</i>	7	<i>Qianichthyosaurus xingyiensis</i>	9
<i>Acuetzpalin carranzai</i>	4	<i>Ichthyosaurus conybeari</i>	7	<i>Qianichthyosaurus zhoui</i>	9
<i>Arthropterygius chrisorum</i>	4	<i>Ichthyosaurus larkini</i>	7	<i>Quasianosteosaurus vikinghoegdai</i>	9
<i>Arthropterygius hoybergeti</i>	4	<i>Ichthyosaurus somersetensis</i>	7	<i>Sclerocormus parviceps</i>	9
<i>Arthropterygius lundii</i>	4	<i>Isfjordosaurus minor</i>	7	<i>Shastasaurus alexandrae</i>	9
<i>Arthropterygius thalassonotus</i>	5	<i>Leninia stellans</i>	7	<i>Shastasaurus liangae</i>	9
<i>Athabascasaurus bitumineus</i>	5	<i>Leptonectes moorei</i>	7	<i>Shastasaurus pacificus</i>	9
<i>Barracudasauroides panxianensis</i>	5	<i>Leptonectes solei</i>	7	<i>Shastasaurus sikkaniensis</i>	9
<i>Besanosaurus leptorhynchus</i>	5	<i>Leptonectes tenuirostris</i>	7	<i>Shonisaurus popularis</i>	9
<i>Brachypterygius alekseevi</i>	5	<i>Macgowania janiceps</i>	7	<i>Simbirskiasaurus birjukovi</i>	9
<i>Brachypterygius extremus</i>	5	<i>Maiaspondylus lindoei</i>	7	<i>Sisteronia seeleyi</i>	9
<i>Brachypterygius pseudoscythica</i>	5	<i>Malawania anachronus</i>	7	<i>Stenopterygius aaleniensis</i>	9
<i>Californosaurus perrini</i>	5	<i>Mikadocephalus gracilirostris</i>	7	<i>Stenopterygius quadricissus</i>	9
<i>Callawayia neoscapularis</i>	6	<i>Mixosaurus cornalianus</i>	7	<i>Stenopterygius triscissus</i>	9
<i>Cartorhynchus lenticarpus</i>	6	<i>Mixosaurus kuhnschneyderi</i>	7	<i>Stenopterygius uniter</i>	9
<i>Caypullisaurus bonapartei</i>	6	<i>Mixosaurus xindianensis</i>	7	<i>Suevoleiathan disinteger</i>	9
<i>Cetarthrosaurus walkeri</i>	7	<i>Mollesaurus pariallus</i>	7	<i>Suevoleiathan integer</i>	9
<i>Chacaicosaurus cayi</i>	7	<i>Muiscasaurus catheti</i>	7	<i>Sveltonectes insolitus</i>	9
<i>Chaohusaurus chaoxianensis</i>	7	<i>Nannopterygius enthekiodon</i>	7	<i>Temnodontosaurus azerguensis</i>	9
<i>Chaohusaurus geishanensis</i>	7	<i>Nannopterygius saveljeviensis</i>	8	<i>Temnodontosaurus crassimanus</i>	9
<i>Chaohusaurus zhangjiawanensis</i>	7	<i>Nannopterygius yasykovi</i>	8	<i>Temnodontosaurus eurycephalus</i>	9
<i>Contectopalatus atavus</i>	7	<i>Ophthalmosaurus icenicus</i>	8	<i>Temnodontosaurus nuertingensis</i>	9
<i>Cymbospondylus buchseri</i>	7	<i>Ophthalmosaurus natans</i>	8	<i>Temnodontosaurus platyodon</i>	9
<i>Cymbospondylus nichollsi</i>	7	<i>Parvinator wapitiensis</i>	8	<i>Temnodontosaurus trigonus</i>	9
<i>Cymbospondylus petrinus</i>	7	<i>Pervushovisaurus bannovkensis</i>	8	<i>Thaisaurus chonglakmanii</i>	9
<i>Cymbospondylus piscosus?</i>	7	<i>Pervushovisaurus campylodon</i>	8	<i>Thalattoarchon saurophagis</i>	9
<i>Dearcmhara shawcrossi</i>	7	<i>Pessopteryx nisseri</i>	8	<i>Tholodus schmidi</i>	9
<i>Eurhinosaurus longirostris</i>	7	<i>Phalarodon callawayi</i>	8	<i>Toretocnemus californicus</i>	9
<i>Excalibosaurus costini</i>	7	<i>Phalarodon fraasi</i>	8	<i>Toretocnemus zitteli</i>	9
<i>Gengasaurus nicosiai</i>	7	<i>Phalarodon major</i>	8	<i>Undorosaurus gorodischensis</i>	9
<i>Grippia longirostris</i>	7	<i>Phantomosaurus neubigi</i>	8	<i>Undorosaurus kielanae</i>	9
<i>Guizhouichthyosaurus tangae</i>	7	<i>Platypterygius hercynicus</i>	8	<i>Undorosaurus nessovi</i>	9
<i>Guizhouichthyosaurus wolonggangense</i>	7	<i>Platypterygius americanus</i>	8	<i>Undorosaurus trautscholdi</i>	9
<i>Gulosaurus helmi</i>	7	<i>Platypterygius australis</i>	8	<i>Utatusaurus hataii</i>	9
<i>Hauffiopteryx typicus</i>	7	<i>Platypterygius hauthali</i>	8	<i>Wahlisaurus massarae</i>	9
<i>Himalayasaurus tibetensis</i>	7	<i>Platypterygius ochevi</i>	8	<i>Wimanius odontopalatus</i>	10
<i>Hudsonelpidia brevirostris</i>	7	<i>Platypterygius platydactylus</i>	8	<i>Xinminosaurus catactes</i>	10
<i>Ichthyosaurus acutirostris</i>	7	<i>Platypterygius sachicarum</i>	9		
<i>Ichthyosaurus anningae</i>	7	<i>Protoichthyosaurus applebyi</i>	9		

ICHTHYOSAUIROMORPHA Motani et al., 2015

HUPEHSUCHIA Carroll & Dong, 1991

Eohupehsuchus brevicollis Chen et al, 2014b

- * 2014b *Eohupehsuchus brevicollis* Chen et al. p 4 [Jialingjiang Formation (Upper Spathian, Lower Triassic); Yangping, Yuan'an County, Hubei Province, China].

Eretmorhipis carrolldongi Chen et al., 2015

- 1991 Hupehsuchia n. g., n. s. p 143 [Jialingjiang Formation (Upper Spathian, Lower Triassic); Tuling, Baihechuan, Xunjian District, Nanzhang County, Hubei Province, China].
- * 2015 *Eretmorhipis carrolldongi* Chen et al. p 4 [Jialingjiang Formation (Upper Spathian, Lower Triassic); Yingzhishang, Yuan'an County, Hubei Province, China].

Hupehsuchus nanchangensis Young & Dong, 1972

Nanchangosaurus suni Wang, 1959

Parahupehsuchus longus Chen et al., 2014a

ICHTHYOSAUIRIFORMES Motani et al., 2015

Acamptonectes densus Fischer et al., 2012

URN:LSID:ZOOBANK.ORG:ACT:AAB4BA7E-F53D-4962-8A9C-3240DFE2C4D8

- v * 2012 *Acamptonectes densus* Fischer et al., 2012 Fischer et al. p 3 [Speeton Clay Formation, *Simbiskites concinnus/staffi* ammonite biozones (basal-upper Hauterivian, Lower Cretaceous, Cretaceous); Speeton, Yorkshire, U.K. and Cremlingen, Lower Saxony, Germany.]
- LSID
- URN:LSID:ZOOBANK.ORG:PUB:66B3821A-1025-48DC-9C5F-7E6277FFD975

Aegirosaurus leptospondylus (Wagner, 1853)

- * 1853 *Ichthyosaurus leptospondylus* Wagner, 1853 Wagner [Solnhofen Formation (Lower Tithonian, Upper Jurassic, Jurassic); Germany.]
- 2000 *Aegirosaurus leptospondylus* (Wagner, 1853) Bardet & Fernández p 504 [Malm 2b, Solnhofen Formation (early Lower Tithonian, Upper Jurassic, Jurassic); Borsheim, Schrandel quarry district; Bavaria, Germany.]

Acuetzpalin carranzai Barrientos-Lara et al., 2020

URN:LSID:ZOOBANK.ORG:ACT:90130A25-6901-4DA6-84B8-D0680DF9BCAB

- * 2020 *Acuetzpalin carranzai* Barrientos-Lara et al., 2020 Barrientos-Lara et al. p 3 [La Casita Formation (Kimmeridgian, Upper Jurassic, Jurassic); Cerro de Palotes, near of Cuencamé, Durango state, Northeast Mexico.]
- LSID
- URN:LSID:ZOOBANK.ORG:PUB:2287DBB3-3E85-409D-9D97-A946DE865FCB

Arthropterygius chrisorum (Russell, 1993)

- * 1993 *Ophthalmosaurus chrisorum* Russell, 1993 Russell p 198 [Ringnes Formation (Oxfordian-Kimmeridgian, Upper Jurassic, Jurassic); Cape Grassy, Melville Island, Canada (UTM WGS84 12X 433220 8453461 = 76° 9' 4" N 113° 30' W).]
- ? 2017 *Keilhauia nui* Delsett et al., 2017 Delsett et al. p 7 [Slottsmøya Member, Agardfjellet Formation (early Berriasian, Lower Cretaceous, Cretaceous); Janusfjellet, Spitsbergen, Svalbard (UTM WGS84 33X 0518847 8696044).] *vide* Zverkov & Prilepskaya (2019)
- p 2018 *Palvennia hoybergeti* Druckenmiller et al., 2012 Delsett et al. p 8 [UTM WGS84 33X 0519622 8695649] PMO 222.669 *vide* Zverkov & Prilepskaya (2019)
- 2019 *Arthropterygius chrisorum* (Russell, 1993) Zverkov & Prilepskaya p 15

Arthropterygius hoybergeti (Druckenmiller et al., 2012)

URN:LSID:ZOOBANK.ORG:ACT:03BA5E23-17B5-4AB1-B98A-681B9968A3F9

- * 2012 *Palvennia hoybergeti* Druckenmiller et al., 2012 Druckenmiller et al. p 326 [Slottsmøya Member, Agardfjellet Formation (Middle Volgian, Upper Jurassic, Jurassic); Spitsbergen, Svalbard (UTM WGS84 33X 0518775 8696150).] URN:LSID:ZOOBANK.ORG:PUB:8791DF9D-E15B-4470-A02A-F05ECC3BB7D6
- LSID
- p 2018 *Palvennia hoybergeti* Druckenmiller et al., 2012 Delsett et al. p 8 [UTM WGS84 33X 0519622 8695649]
- 2019 *Arthropterygius hoybergeti* (Druckenmiller et al., 2012) Zverkov & Prilepskaya p 31

Arthropterygius lundii (Roberts et al., 2014)

URN:LSID:ZOOBANK.ORG:ACT:71E65B35-7215-44AA-BCE7-E9A3B265E04F

- * 2014 *Janusaurus lundii* Roberts *et al.*,2014 LSID Roberts *et al.* p 4 [Slottsmøya Member, Agardfjellet Formation (middle Volgian, Upper Jurassic, Jurassic); Janusfjellet, Spitsbergen, Svalbard (UTM WGS84 33X 518821 8696195 = 78° 20.264' N 15° 50.044' E).] URN:LSID:ZOOBANK.ORG:PUB:FF4834F1-AEED-4B08-8E74-7125801C1B3E *fide* Zverkov & Prilepskaya (2019)
- 2016 *Janusaurus lundii* Roberts *et al.*,2014 Delsett *et al.*
- 2017 *Janusaurus lundii* Roberts *et al.*,2014 Delsett *et al.*
- 2019 *Arthropterygius lundii* (Roberts *et al.*,2014) Zverkov & Prilepskaya p 40

Arthropterygius thalassonotus Campos *et al.*,2019

URN:LSID:ZOOBANK.ORG:ACT:3F09C714-961C-433C-B056-DFD3F8E3B5CD

- * 2019 *Arthropterygius thalassonotus* Campos *et al.*,2019 LSID Campos *et al.* p 184 [Vaca Muerta Formation (late Tithonian, Upper Jurassic, Jurassic); Yesera del Tromen-Pampa Tril area, north-western Neuquén Province, Argentina.] URN:LSID:ZOOBANK.ORG:PUB:A668AA96-CE4F-442E-AD3E-B757AD580CFC

Athabascasaurus bitumineus Druckenmiller & Maxwell,2010

- v * 2010 *Athabascasaurus bitumineus* Druckenmiller & Maxwell,2010 Druckenmiller & Maxwell p 1039 [Wabiskaw Member, Clearwater Formation (lowermost Albian, Lower Cretaceous, Cretaceous); 35 km north of Fort McMurray, Alberta, Canada (UTM WGS84 12V 459464 6317120 = 56° 59' 45" N 111° 40' 02" W).]

Barracudasauroides panxianensis (Jiang *et al.*,2006)

- * 2006 *Mixosaurus panxianensis* Jiang *et al.*,2006 Jiang *et al.* p 62 [Upper Member, Guanling Formation, *Nicoraella germanicus* Conodont Biozone (Pelsonian, Anisian, Middle Triassic, Triassic); Yangjuan Village, Xinmin District, Panxian County, Guizhou Province, China.]
- 2010 *Barracudasauroides panxianensis* (Maisch,2010) Maisch p 161

Besanosaurus leptorhynchus Dal Sasso & Pinna,1996

- * 1996 *Besanosaurus leptorhynchus* Dal Sasso & Pinna,1996 Dal Sasso & Pinna p 4 [Besano Formation, *Nevadites secedensis* Ammonite Biozone (Ilyrian,Anisian, Middle Triassic, Triassic); Sasso Caldo quarry, Besano, Varese Province, Lombardy, Northern Italy.]

Brachypterygius alekseevi (Arkhangelsky,2001)

- * 2001 *Otschevia alekseevi* Arkhangelsky,2001 Arkhangelsky p 629 [*Dorsoplanites panderi* Ammonite Biozone (Volgian, Upper Jurassic, Jurassic); Volga River, 18 km north of Ulyanovsk, Ulyanovsk District, Ulyanovsk Region, Russian.]
- 2010 *Brachypterygius alekseevi* (Arkhangelsky,2001) Maisch p 167
- 2015 *Grendelius alekseevi* (Zverkov *et al.*,2015) Zverkov *et al.* p 562

Brachypterygius extremus (Boulenger,1904)

URN:LSID:ZOOBANK.ORG:ACT:5B04A1AF-9081-417D-9BFC-DC3AFA6DAAE3

- v * 1904 *Ichthyosaurus extremus* Boulenger,1904 LSID Boulenger p 425 [Kimmeridge Clay Formation (Kimmeridgian-Tithonian, Upper Jurassic, Jurassic); Smallmouth Sands, Weymouth, Dorset, U.K.]
- URN:LSID:ZOOBANK.ORG:PUB:98E5CD50-9FAF-458D-9D0A-9464EF76F429
- v 1922 *Brachypterygius extremus* (Boulenger,1904) vonHuene p 97 URN:LSID:ZOOBANK.ORG:PUB:2E316B82-8A25-43AE-A1C5-3785124EA6AE
- v * 1976 *Grendelius mordax* McGowan,1976 McGowan p 671 [Kimmeridge Clay Formation, *Aulacostephanus autissiodorensis* Ammonite Biozone (middle Kimmeridgian, Upper Jurassic, Jurassic); Stowbridge, Norfolk, U.K. (UTM WGS84 31U 321960 5835045).]

Brachypterygius pseudoscythica (Efimov,1998)

- * 1998 *Otschevia pseudoscythica* Efimov,1998 Efimov p 83 [*Ilowaiskya pseudoscythica* Ammonite Biozone (Volgian, Upper Jurassic, Jurassic); Volga River, Ulyanovsk District, Ulyanovsk Region, Russia.]
- 2000 *Brachypterygius pseudoscythius* (Efimov,1998) [sic.] Maisch & Matzke p 79
- 2015 *Grendelius pseudoscythicus* (Efimov,1998) [sic.] Zverkov *et al.* p 561

Californosaurus perrini (Merriam,1902)

- * 1902 *Shastasaurus perrini* Merriam,1902 Merriam p 89 [Hosselkus Limestone Formation; Shasta County, California, U.S.A.]
- 1905 *Delphinosaurus perrini* (Merriam,1902) Merriam p 24
- 1934 *Californosaurus perrini* (Merriam,1902) Kuhn p 27 [*non Delphinosaurus* Eichwald,1853]

Callawayia neoscapularis (McGowan,1994)

- * 1994 *Shastasaurus neoscapularis* McGowan,1994 McGowan p 170 [Pardonet Formation, *Epigondolella triangularis* Conodont Biozone (Norian, Upper Triassic, Triassic); Peace Reach, Williston Lake, British Columbia, Canada.]
- 2000 *Callawayia neoscapularis* (McGowan,1994) Maisch & Matzke p 69 New combination takes priority over *Metashastasaurus* (Nicholls & Manabe,2001, p. 1001).
- 2001 *Metashastasaurus neoscapularis* (McGowan,1994) Nicholls & Manabe p 985 [Pardonet Formation (Norian, Upper Triassic, Triassic); Chicken Creek, British Columbia, Canada.]

Cartorhynchus lenticarpus Motani et al.,2015

URN:LSID:ZOOBANK.ORG:ACT:FCCC9BB7-FD52-42F4-B2EC-B0B7E2A1CA32

- * 2015 *Cartorhynchus lenticarpus* Motani et al.,2015 Motani et al. p 485 [Upper Member, Nanlinghu Formation, *Subcolumbites* Ammonite Biozone (Olenekian, Lower Triassic, Triassic); Majishan Quarry, Chaohu City, Hefei, China (UTM WGS84 50R 577953 3499041 = 31° 37' 26" N 117° 49' 19" E).]

LSID

URN:LSID:ZOOBANK.ORG:PUB:9CFFEE63-2B8A-4C01-B9C7-CD3C53D684F5

Caypullisaurus bonapartei Fernández,1997

URN:LSID:ZOOBANK.ORG:ACT:046EED7E-C624-465F-B0D4-1BB782CCD97D

- * 1997 *Caypullisaurus bonapartei* Fernández,1997 Fernández p 480 [Vaca Muerta Formation, *Virgatosphinctes mendozanus* Ammonite Biozone (late Tithonian, Upper Jurassic, Jurassic); Cerro Lotena, Neuquén Province, northwest patagonia, Argentina (UTM WGS84 19H 442358 5661434 = 39° 11' 40" N 69° 40' 03" S).]

LSID

URN:LSID:ZOOBANK.ORG:PUB:1A5DDCD0-1713-410A-AE1B-F02EA1F1DF77

Cetarthrosaurus walkeri Seeley,1873
Chacaicosaurus cayi Fernández,1994
Chaohusaurus chaoxianensis (Chen,1985)
Chaohusaurus geishanensis Young & Dong,1972
Chaohusaurus zhangjiawanensis Chen *et al.*,2013
Contectopalatus atavus (Quenstedt,1852)
Cymbospondylus buchseri Sander,1989
Cymbospondylus nichollsi Fröbisch *et al.*,2006
Cymbospondylus petrinus Leidy,1868
Cymbospondylus piscosus? Leidy,1868
Dearcmhara shawcrossi Brusatte *et al.*,2015
Eurhinosaurus longirostris (Mantell,1851)
Excalibosaurus costini McGowan,1986
Gengasaurus nicosiai Paparella *et al.*,2016
Grippia longirostris Wiman,1929
Guizhouichthyosaurus tangae Yin *et al.*,2000
Guizhouichthyosaurus wolonggangense (Chen *et al.*,2007)
Gulosaurus helmi Cuthbertson *et al.*,2013
Hauffiopteryx typicus Maisch,2008
Himalayasaurus tibetensis Young & Dong,1972
Hudsonelpidia brevirostris McGowan,1995
Ichthyosaurus acutirostris Owen,1840
Ichthyosaurus anningae Lomax & Massare,2015
Ichthyosaurus breviceps Owen,1881
Ichthyosaurus communis Conybeare,1822
Ichthyosaurus conybeari Lydekker,1888
Ichthyosaurus larkini Lomax & Massare,2017
Ichthyosaurus somersetensis Lomax & Massare,2017
Isfjordosaurus minor (Wiman,1910)
Leninia stellans Fischer *et al.*,2014a
Leptonectes moorei McGowan & Milner,1999
Leptonectes solei (McGowan,1993)
Leptonectes tenuirostris (Conybeare,1822)
Macgowania janiceps (McGowan,1996)
Maiaespondylus lindoei Maxwell & Caldwell,2006
Malawania anachronus Fischer *et al.*,2013
Mikadocephalus gracilirostris Maisch & Matzke,1997
Mixosaurus cornalianus (Bassani,1886)
Mixosaurus kuhnschneyderi (Brinkmann,1998)
Mixosaurus xindianensis Chen & Cheng,2010
Mollesaurus pariallus Fernández,1999
Muiscasaurus catheti Maxwell *et al.*,2016

* 2016 *Muiscasaurus catheti* Maxwell *et al.*,2016

Maxwell *et al.* p 61 [Arcillolitas abigarradas Member, Paja Formation (Barremian–Aptian, Lower Cretaceous, Cretaceous); Vereda Llanitos, Sachica, Boyaca, Colombia (UTM WGS84 18N 662860 616018 = 05° 34.278' N 73° 31.781' W).]

Nannopterygius enthekiodon (Hulke,1871)

URN:LSID:ZOOBANK.ORG:ACT:8467F95F-AC53-4EA7-9612-230E9222A6FC

v * 1871 *Ichthyosaurus enthekiodon* Hulke,1871

LSID

Hulke p 441 [Kimmeridge Clay Formation (Kimmeridgian–Tithonian, Upper Jurassic, Jurassic); Kimmeridge Bay, Dorset, U.K.] URN:LSID:ZOOBANK.ORG:PUB:4F0E90D0-27FF-409A-9CD5-976F182B8B4C

1922 *Nannopterygius enthekiodon* (Hulke,1871)

vonHuene p 98 URN:LSID:ZOOBANK.ORG:PUB:2E316B82-8A25-43AE-A1C5-3785124EA6AE

Nannopterygius saveljeviensis (Arkhangelsky,1997)

- * 1997 *Paraophthalmosaurus savejeviensis* Arkhangelsky,1997 Arkhangelsky p 88
- 1999b *Yasykovia kabanovi* Efimov,1999b Efimov p 98
- 2020 *Nannopterygius savejeviensis* (Arkhangelsky,1997) Zverkov & Jacobs p 246 [Volgian, Upper Jurassic, Jurassic.]

Nannopterygius yasykovi (Efimov,1999b)

- * 1999b *Yasykovia sumini* Efimov,1999b Efimov p 98

Ophthalmosaurus icenicus Seeley,1874

URN:LSID:ZOOBANK.ORG:ACT:F598EAB9-08BF-44CF-BBF3-BB940BD24DBE

- v * 1874 *Ophthalmosaurus icenicus* Seeley,1874 Seeley p 707 [Peterborough Member, Oxford Clay Formation (Callovian, Middle Jurassic, Jurassic); Peterborough, Cambridgeshire.]
LSID URN:LSID:ZOOBANK.ORG:PUB:4C83C9B2-665D-4AD7-8AF8-D365E5491831

Ophthalmosaurus natans (Marsh,1879)

Parvinatator wapitiensis Nicholls & Brinkman,1995

Pervushovisaurus bannovkensis Arkhangelsky,1998

Pervushovisaurus campylodon (Carter,1846)

- * 1846 *Ichthyosaurus campylodon* Carter,1846 Carter p 60 [Upper Greensand Formation (Albian–Cenomanian, Lower–Upper Cretaceous, Cretaceous); Cambridge, Cambridgeshire, U.K.]
- 1922 *Myopterygius campylodon* (Carter,1846) vonHuene p 98 URN:LSID:ZOOBANK.ORG:PUB:2E316B82-8A25-43AE-A1C5-3785124EA6AE
- 1972 *Platypterygius campylodon* (Carter,1846) McGowan p 17
- 2016 *Pervushovisaurus campylodon* (Carter,1846) Fischer p 8

Pessopteryx nisseri Wiman,1910

Phalarodon callawayi Schmitz *et al.*,2004

Phalarodon fraasi Merriam,1910

Phalarodon major vonHuene,1916

Phantomosaurus neubigi (Sander,1997)

Platypterygius hercynicus Kuhn,1946

Platypterygius americanus Nace,1939

- * 1939 *Myopterygius americanus* Nace,1939 Nace p 674 [Mowry Shale Member, Graneros Formation; Crook County Wyoming, U.S.A.]
- 1968 *Myopterygius americanus* Nace,1939 Romer p 27 [Mowry Shale Member, Graneros Formation; Osage, Wyoming, U.S.A.]
- 1972 *Platypterygius americanus* (Nace,1939) McGowan p 17

Platypterygius australis (M'Coy,1867)

Platypterygius hauthali (vonHuene,1927)

Platypterygius ochevi Arkhangelsky *et al.*,2008

Platypterygius platydactylus (Broili,1907)

1922 *Platypterygius platydactylus* (Broili,1907) vonHuene p 99 URN:LSID:ZOOBANK.ORG:PUB:2E316B82-8A25-43AE-A1C5-3785124EA6AE

Platypterygius sachicarum Páramo,1997
Protoichthyosaurus applebyi Lomax *et al.*,2017
Protoichthyosaurus prostaxalis Appleby,1979
Qianichthyosaurus xingyiensis Yang *et al.*,2013
Qianichthyosaurus zhoui Li,1999
Quasianosteosaurus vikinghoegdai Maisch & Matzke,2003
Sclerocormus parviceps Jiang *et al.*,2016
Shastasaurus alexandrae Merriam,1902
Shastasaurus liangae (Yin *et al.*,2000)
Shastasaurus pacificus Merriam,1895
Shastasaurus sikkaniensis (Nicholls & Manabe,2004)
Shonisaurus popularis Camp,1976
Simbirskiasaurus birjukovi Otschev & Efimov,1985
Sisteronia seeleyi Fischer *et al.*,2014^b
Stenopterygius aaleniensis Maxwell *et al.*,2012
Stenopterygius quadriscissus (Quenstedt,1858)
Stenopterygius triscissus (Quenstedt,1858)
Stenopterygius uniter vonHuene,1931^a
Suevoleviathan disinteger (vonHuene,1926)
Suevoleviathan integer (Bronn,1844)
Sveltonectes insolitus Fischer *et al.*,2011
Temnodontosaurus azerguensis Martin *et al.*,2012
Temnodontosaurus crassimanus (Blake,1876)
Temnodontosaurus eurycephalus McGowan,1974
Temnodontosaurus nuertingensis (vonHuene,1931^b)
Temnodontosaurus platyodon (Conybeare,1822)
Temnodontosaurus trigonus (vonTheodori,1843)
Thaisaurus chonglakmanii Mazin *et al.*,1991
Thalattoarchon saurophagis Fröbisch *et al.*,2013
Tholodus schmidi vonMeyer,1849
Toretocnemus californicus Merriam,1903
Toretocnemus zitteli (Merriam,1903)
Undorosaurus gorodischensis Efimov,1999^a

- * 1999^a *Undorosaurus gorodischensis* Efimov,1999^a Efimov p 52 [*Epivirgatites nikitini* Ammonite Biozone (Volgian, Upper Jurassic, Jurassic); Undory, Volga Oblast, Russia.]
- 2012 *Cryopterygius kristiansenae* Druckenmiller *et al.*,2012 Druckenmiller *et al.* p 313 [Slottsmøya Member, Agardfjellet Formation (middle Volgian, Upper Jurassic, Jurassic); Janusfjellet, Spitsbergen, Svalbard (UTM WGS84 33X 0518842 8696067).] URN:LSID:ZOOBANK.ORG:PUB:8791DF9D-E15B-4470-A02A-F05ECC3BB7D6 *fide* Zverkov & Efimov (2019)
- 2019 *Undorosaurus gorodischensis* Efimov,1999^a Zverkov & Efimov p 1189

Undorosaurus kielanae (Tyborowski,2016)

- * 2016 *Cryopterygius kielanae* Tyborowski,2016 Tyborowski p 793 [Ślawnio Limestone Member, Kcynia Formation (uppermost Lower Tithonian = Middle Volgian, Upper Jurassic, Jurassic); Owadów-Brzezinki Quarry, Ślawnio (UTM WGS84 34U 439831 5692022 = 51.3762583 N 20.1355167 E).]
- ? 2019 *Undorosaurus kielanae* (Tyborowski,2016) Zverkov & Efimov p 1187

Undorosaurus nessovi Efimov,1999^a

Undorosaurus trautscholdi Arkhangelsky & Zverkov,2014

Utatusaurus hataii Shikama *et al.*,1978

Wahlisaurus massaræ Lomax,2016

- * 2016 *Wahlisaurus massaræ* Lomax,2016 Lomax p 388 [Barnstone Member?, Scunthorpe Mudstone Formation?, Pre-*planorbis* or *Psiloceras planorbis* beds (lowermost Hettangian, Lower Jurassic, Jurassic); Normanton Hills near Normanton on Soar, Nottinghamshire, U.K.]

Wimanius odontopalatus Maisch & Matzke, 1998

Xinminosaurus catactes Jiang *et al.*, 2008

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