

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 Lua^ATeX 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:

Example

Cartorhynchus lenticarpus Motani et al., 2015			
URN:LSID:ZOOBANK.ORG:ACT:FCCC9BB7-FD52-42F4-B2EC-B0B7E2A1CA32			
<status>	<year>	<Taxon>	<Authority, Year>
*	2015	Cartorhynchus lenticarpus	Motani et al., 2015
		LSID	
		<reference, page> [<occurrence information>.] <comments>	
		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. [LSID](#)

'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 symbols in the leftmost column

- * (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 surrounding or changing the font

- 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

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](https://www.iczn.org/the-code/the-international-code-of-zoological-nomenclature-the-code-online/(Article%208.5.3);https://en.wikipedia.org/wiki/ZooBank)

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:

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.

List of Species

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

ICHTHYOSAUIROMORPHA Motani *et al.*, 2015

HUPEHSUCHIA Carroll & Zhi-Ming, 1991

Eohupehsuchus brevicollis Chen *et al.*, 2014a

URN:LSID:ZOOBANK.ORG:ACT:94F905DD-8995-4477-841A-85DEDA8C8287

v * 2014a *Eohupehsuchus brevicollis* Chen *et al.*, 2014a
LSID

Chen *et al.* p 4 [Jialingjiang Formation (upper Spathian, Lower Triassic, Triassic); Yangping, Yuan'an County, Hubei Province, China.]
URN:LSID:ZOOBANK.ORG:PUB:1B8887A9-F513-427D-BE9A-DBBB15DD9A44

Eretmorhipis carrolldongi Chen *et al.*, 2015

URN:LSID:ZOOBANK.ORG:ACT:317DA1DF-4381-43F5-90CE-ADFD680F7178

1991 Hupehsuchia n. gen. n. sp.

Carroll & Zhi-Ming p 143 [Jialingjiang Formation (upper Spathian, Lower Triassic, Triassic); Tuling, Baihechuan, Xunjiang District, Nanzhang County, Hubei Province, China.]

v * 2015 *Eretmorhipis carrolldongi* Chen *et al.*, 2015
LSID

Chen *et al.* p 4 [Jialingjiang Formation (upper Spathian, Lower Triassic, Triassic); Yingzhishang, Yuan'an County, Hubei Province, China.]
URN:LSID:ZOOBANK.ORG:PUB:132627FE-9142-4EE2-BACB-08CAFC65C3E2

Hupehsuchus nanchangensis Young & Dong, 1972

URN:LSID:ZOOBANK.ORG:ACT:416BF673-273A-4F3D-99B3-F369DBEC6CEA

v * 1972 *Hupehsuchus nanchangensis* Young & Dong, 1972
LSID

Young & Dong p 28 [Jialingjiang Formation (upper Spathian, Lower Triassic, Triassic).] URN:LSID:ZOOBANK.ORG:PUB:D2CAD534-D3B0-4B2B-871F-7011E4B1EE74

Nanchangosaurus suni Wang, 1959

* 1959 *Nanchangosaurus suni* Wang, 1959
LSID

Wang [Jialingjiang Formation (upper Spathian, Lower Triassic, Triassic).]

2014c *Nanchangosaurus suni* Wang, 1959

URN:LSID:ZOOBANK.ORG:PUB:C31DBAA9-EDA9-4D29-92DD-BFC80461F0F4
Chen *et al.* p 3 [Jialingjiang Formation (upper Spathian, Lower Triassic, Triassic); Yuan'an County, Hubei Province, China.]

Parahupehsuchus longus Chen *et al.*, 2014b

URN:LSID:ZOOBANK.ORG:ACT:0B2F1D4D-0435-496F-B1C0-6913F265240F

v * 2014b *Parahupehsuchus longus* Chen *et al.*, 2014b
LSID

Chen *et al.* p 3 [Jialingjiang Formation (upper Spathian, Lower Triassic, Triassic); Yuan'an County, Hubei Province, China.] URN:LSID:ZOOBANK.ORG:PUB:0F2EED52-F0A2-4125-B96A-8E39E9854DBE

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
LSID

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.]
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 ζ 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
LSID

Barrientos-Lara *et al.* p 3 [La Casita Formation (Kimmeridgian, Upper Jurassic, Jurassic); Cerro de Palotes, near of Cuencamé, Durango state, Northeast Mexico.]
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 = 78.3363734°N 15.8351277°E).] *fide* Zverkov & Prilepskaya (2019)
- p 2018 *Palvennia hoybergeti* Druckenmiller *et al.*, 2012 Delsett *et al.* p 8 [UTM WGS84 33X 0519622 8695649 = 78.3327333°N 15.8692035°E] PMO
- 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 **LSID** Druckenmiller *et al.* p 326 [Slottsmøya Member, Agardfjellet Formation (Middle Volgian, Upper Jurassic, Jurassic); Spitsbergen, Svalbard (UTM WGS84 33X 0518775 8696150 = 78.3373322°N 15.8320045°E).] URN:LSID:ZOOBANK.ORG:PUB:8791DF9D-E15B-4470-A02A-F05ECC3BB7D6
- p 2018 *Palvennia hoybergeti* Druckenmiller *et al.*, 2012 Delsett *et al.* p 8 [UTM WGS84 33X 0519622 8695649 = 78.3327333°N 15.8692035°E]
- 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

URN:LSID:ZOOBANK.ORG:ACT:1CE8B3C1-8771-443A-8831-00025FB84CA6

- v * 2010 *Athabascasaurus bitumineus* Druckenmiller & Maxwell, 2010 **LSID** 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).] URN:LSID:ZOOBANK.ORG:PUB:2540811F-95E5-45BB-9B32-8E0416F61681

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

URN:LSID:ZOOBANK.ORG:ACT:05C7C635-6E53-4070-8856-047553A6B0BF

- * 2006 *Mixosaurus panxianensis* Jiang *et al.*, 2006 **LSID** Jiang *et al.* p 62 [Upper Member, Guanling Formation, *Nicoraelia germanicus* Conodont Biozone (Pelsonian, Anisian, Middle Triassic, Triassic); Yangjuan Village, Xinmin District, Panxian County, Guizhou Province, China.] URN:LSID:ZOOBANK.ORG:PUB:A3ED6813-7AA8-47CA-8197-04CA562417DF
- 2010 *Barracudasauroides panxianensis* (Maisch, 2010) Maisch p 161

Besanosaurus leptorhynchus Dal Sasso & Pinna, 1996

URN:LSID:ZOOBANK.ORG:ACT:47C32E1B-18FE-40CF-B98E-E9A537601E43

- * 1996 *Besanosaurus leptorhynchus* Dal Sasso & Pinna, 1996 **LSID** 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.] URN:LSID:ZOOBANK.ORG:PUB:EEA0F11C-D7BF-41BE-856E-DC2F3599273A

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) von Huene 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 = 52.6361361°N 0.368878°E).]

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 pseudoscythicus* (Efimov, 1998) Maisch & Matzke p 79 [sic.]
- 2015 *Grendelius pseudoscythicus* (Efimov, 1998) Zverkov *et al.* p 561 [sic.]

Californosaurus perrini (Merriam, 1902)

- * 1902 *Shastasaurus perrini* Merriam, 1902 Merriam p 89 [Hossekus 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* von 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 **LSID** 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).]
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 **LSID** Fernández p 480 [Vaca Muerta Formation, *Virgatosphinctes mendocanus* 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).] URN:LSID:ZOOBANK.ORG:PUB:1A5DDCD0-1713-410A-AE1B-F02EA1F1DF77

Cetarthrosaurus walkeri (Seeley, 1873)

- * 1869 *Ichthyosaurus walkeri* Seeley, 1869 Seeley p 65 [Gault Formation (late Albion, Lower Cretaceous, Cretaceous).] Re-worked into Cambridge Greensand Member (Lower Chalk Formation; early Cenomanian). Described from a cast.
- 1873 *Cetarthrosaurus walkeri* (Seeley, 1869) Seeley p 505
- 2014a *Cetarthrosaurus walkeri* (Seeley, 1869) Fischer *et al.* p 17

Chacaicosaurus cayi Fernández, 1994

Chaohusaurus chaoxianensis (Chen, 1985)

Chaohusaurus geishanensis Young & Dong, 1972

- * 1972 *Chaohusaurus geishanensis* Young & Dong, 1972 Young & Dong p 11 [Qinglong Formation (Spathian, Lower Triassic, Triassic); Chao County, Anhui Province, China.]

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

- * 1972 *Himalayasaurus tibetensis* Young & Dong, 1972 LSID Young & Dong p 7 [Langjiexue Group (Norian, Middle Triassic, Triassic); Tulong Area, Xizang, Tibet, China.] [URN:LSID:ZOOBANK.ORG:PUB:D2CAD534-D3B0-4B2B-871F-7011E4B1EE74](https://zoobank.org/PUB:D2CAD534-D3B0-4B2B-871F-7011E4B1EE74)

Hudsonelpidia brevirostris McGowan, 1995
Ichthyosaurus acutirostris Owen, 1840
Ichthyosaurus anningae Lomax & Massare, 2015
Ichthyosaurus breviceps Owen, 1881
Ichthyosaurus communis Conybeare, 1822
Ichthyosaurus conybearei Lydekker, 1888
Ichthyosaurus larkini Lomax & Massare, 2017
Ichthyosaurus somersetensis Lomax & Massare, 2017
Isffordosaurus minor (Wiman, 1910)
Leninia stellans Fischer *et al.*, 2014b
Leptonectes moorei McGowan & Milner, 1999
Leptonectes solei (McGowan, 1993)
Leptonectes tenuirostris (Conybeare, 1822)
Macgowania janiceps (McGowan, 1996)
Maiaspondylus 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-AC53-4EA7-9612-230E922A6FC](https://zoobank.org/ACT:8467F95F-AC53-4EA7-9612-230E922A6FC)

- 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](https://zoobank.org/PUB:4F0E90D0-27FF-409A-9CD5-976F182B8B4C)

1922 *Nannopterygius enthekiodon* (Hulke, 1871) von Huene p 98 [URN:LSID:ZOOBANK.ORG:PUB:2E316B82-8A25-43AE-A1C5-3785124EA6AE](https://zoobank.org/PUB:2E316B82-8A25-43AE-A1C5-3785124EA6AE)

Nannopterygius saveljeviensis (Arkhangelsky, 1997)

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

Nannopterygius yasykovi (Efimov, 1999a)

- * 1999a *Yasykovi sumini* Efimov, 1999a Efimov p 98

Ophthalmosaurus icenicus Seeley, 1874

[URN:LSID:ZOOBANK.ORG:ACT:F598EAB9-08BF-44CF-BBF3-BB940BD24DBE](https://zoobank.org/ACT:F598EAB9-08BF-44CF-BBF3-BB940BD24DBE)

- v * 1874 *Ophthalmosaurus icenicus* Seeley, 1874 [LSID](https://zoobank.org/4C83C9B2-665D-4AD7-8AF8-D365E5491831) Seeley p 707 [Peterborough Member, Oxford Clay Formation (Callovian, Middle Jurassic, Jurassic); Peterborough, Cambridgeshire.]
[URN:LSID:ZOOBANK.ORG:PUB:4C83C9B2-665D-4AD7-8AF8-D365E5491831](https://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) von Huene p 98 [URN:LSID:ZOOBANK.ORG:PUB:2E316B82-8A25-43AE-A1C5-3785124EA6AE](https://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 von Huene, 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 (von Huene, 1927)

Platypterygius ochevi Arkhangelsky *et al.*, 2008

Platypterygius platydactylus (Broili, 1907)

1922 *Platypterygius platydactylus* (Broili, 1907) von Huene p 99 [URN:LSID:ZOOBANK.ORG:PUB:2E316B82-8A25-43AE-A1C5-3785124EA6AE](https://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.*, 2014a
Stenopterygius aaleniensis Maxwell *et al.*, 2012
Stenopterygius quadriscissus (Quenstedt, 1858)
Stenopterygius triscissus (Quenstedt, 1858)
Stenopterygius uniter von Huene, 1931b
Suevoleviathan disinteger (von Huene, 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 (von Huene, 1931a)
Temnodontosaurus platyodon (Conybeare, 1822)
Temnodontosaurus trigonus (von Theodori, 1843)
Thaisaurus chonglakmanii Mazin *et al.*, 1991
Thalattoarchon saurophagis Fröbisch *et al.*, 2013
Tholodus schmidi von Meyer, 1849
Toretocnemus californicus Merriam, 1903
Toretocnemus zitteli (Merriam, 1903)
Undorosaurus gorodischensis Efimov, 1999b

- * 1999b *Undorosaurus gorodischensis* Efimov, 1999b Efimov p 52 [*Epivirgatites nikitini* Ammonite Biozone (Volgian, Upper Jurassic, Jurassic); Undory, Volga Oblast, Russia.]
- 2012 *Cryopterygius kristiansenae* Druckenmiller *et al.*, 2012 LSID Druckenmiller *et al.* p 313 [Slottsmøya Member, Agardfjellet Formation (middle Volgian, Upper Jurassic, Jurassic); Janusfjellet, Spitsbergen, Svalbard (UTM WGS84 33X 0518842 8696067 = 78.3365801°N 15.8349207°E).] URN:LSID:ZOOBANK.ORG:PUB:8791DF9D-E15B-4470-A02A-F05ECC3BB7D6 *vide* Zverkov & Efimov (2019)
- 2019 *Undorosaurus gorodischensis* Efimov, 1999b Zverkov & Efimov p 1189

Undorosaurus kielanae (Tyborowski, 2016)

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

Undorosaurus nessovi Efimov, 1999b

Undorosaurus trautscholdi Arkhangelsky & Zverkov, 2014

Utatusaurus hataii Shikama *et al.*, 1978

Wahlisaurus massarae Lomax, 2016

- * 2016 *Wahlisaurus massarae* 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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