

Ichthyosauromorph Taxonomy

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Contents

Introduction 1

Layout of synonymy lists 1

‘Richter symbols’ & certainty of assignment 2

Life Science Identifiers (LSID) 2

Links in this document 3

List of Species 3

Ichthyosauromorpha 4

Hupehsuchia 4

Ichthyosauriformes 4

References 11

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., 2015a				
URN:LSID:ZOOBANK.ORG:ACT:FCCC9BB7-FD52-42F4-B2EC-B0B7E2A1CA32				
<status>	<year>	<Taxon>	<Authority, Year>	<reference, page> [<occurrence information>.] <comments>
*	2015a	Cartorhynchus lenticarpus	Motani et al., 2015a	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 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	Guizhouichthyosaurus wolonggangense	7	Platypterygius ochevi	9
HUPEHSUCHIA	4	Gulosaurus helmi	7	Platypterygius platydactylus	9
Eohupehsuchus brevicollis	4	Hauffiopteryx typicus	7	Platypterygius sachicarum	9
Eretmorhipis carrolldongi	4	Himalayasaurus tibetensis	7	Protoichthyosaurus applebyi	9
Hupehsuchus nanchangensis	4	Hudsonelpidia brevirostris	8	Protoichthyosaurus prostaxalis	9
Nanchangosaurus suni	4	Ichthyosaurus acutirostris	8	Qianichthyosaurus xingyiensis	9
Parahupehsuchus longus	4	Ichthyosaurus anningae	8	Qianichthyosaurus zhoui	9
ICHTHYOSAUIRIFORMES	4	Ichthyosaurus breviceps	8	Quasianosteosaurus vikinghoegdai	9
Acamptonectes densus	4	Ichthyosaurus communis	8	Sclerocormus parviceps	9
Aegirosaurus leptospondylus	4	Ichthyosaurus conybeari	8	Shastasaurus alexandrae	9
Acuetzpalin carranzai	4	Ichthyosaurus larkini	8	Shastasaurus liangae	9
Arthropterygius chrisorum	4	Ichthyosaurus somersetensis	8	Shastasaurus pacificus	9
Arthropterygius hoybergeti	5	Isfjordosaurus minor	8	Shastasaurus sikkaniensis	9
Arthropterygius lundii	5	Leninia stellans	8	Shonisaurus popularis	9
Arthropterygius thalassonotus	5	Leptonectes moorei	8	Simbirskiasaurus birjukovi	9
Athabascasaurus bitumineus	5	Leptonectes solei	8	Sisteronia seeleyi	9
Barracudasauroides panxianensis	5	Leptonectes tenuirostris	8	Stenopterygius aaleniensis	9
Besanosaurus leptorhynchus	5	Macgowania janiceps	8	Stenopterygius quadriscissus	9
Brachypterygius alekseevi	5	Maiaspondylus lindoei	8	Stenopterygius triscissus	9
Brachypterygius extremus	6	Malawania anachronus	8	Stenopterygius uniter	9
Brachypterygius pseudoscythica	6	Mikadocephalus gracilirostris	8	Suevoleiathan disinteger	9
Californosaurus perrini	6	Mixosaurus cornalianus	8	Suevoleiathan integer	9
Callawayia neoscapularis	6	Mixosaurus kuhnschneyderi	8	Sveltonectes insolitus	9
Cartorhynchus lenticarpus	6	Mixosaurus xindianensis	8	Temnodontosaurus azerguensis	9
Caypullisaurus bonapartei	6	Mollesaurus pariallus	8	Temnodontosaurus crassimanus	9
Cetarthrosaurus walkeri	6	Muiscasaurus catheti	8	Temnodontosaurus eurycephalus	9
Chacaicosaurus cayi	6	Nannopterygius enthekiodon	8	Temnodontosaurus nuertingensis	9
Chaohusaurus brevifemoralis	7	Nannopterygius saveljeviensis	8	Temnodontosaurus platyodon	9
Chaohusaurus chaoxianensis	7	Nannopterygius yasykovi	8	Temnodontosaurus trigonus	9
Chaohusaurus geishanensis	7	Ophthalmosaurus icenicus	8	Thaisaurus chonglakmanii	9
Chaohusaurus zhangjiawanensis	7	Ophthalmosaurus natans	8	Thalassodraco etchesi	9
Contectopalatus atavus	7	Parvinator wapitiensis	8	Thalattoarchon saurophagis	10
Cymbospondylus buchseri	7	Pervushovisaurus bannovkensis	8	Tholodus schmidtii	10
Cymbospondylus nicholli	7	Pervushovisaurus campylodon	8	Toretocnemus californicus	10
Cymbospondylus petrinus	7	Pessopteryx nisseri	9	Toretocnemus zitteli	10
Cymbospondylus piscosus?	7	Phalarodon callawayi	9	Undorosaurus gorodischensis	10
Dearcmhara shawcrossi	7	Phalarodon fraasi	9	Undorosaurus kielanae	10
Eurhinosaurus longirostris	7	Phalarodon major	9	Undorosaurus nessovi	10
Excalibosaurus costini	7	Phantomosaurus neubigi	9	Undorosaurus trautscholdi	10
Gengasaurus nicosiai	7	Platypterygius hercynicus	9	Utatusaurus hataii	10
Grippia longirostris	7	Platypterygius americanus	9	Wahlisaurus massarae	10
Guizhouichthyosaurus tangae	7	Platypterygius australis	9	Wimanius odontopalatus	10
		Platypterygius hauthali	9	Xinminosaurus catactes	10

ICHTHYOSAUIROMORPHA Motani *et al.*, 2015a

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

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

URN:LSID:ZOOBANK.ORG:PUB:C31DBAA9-EDA9-4D29-92DD-BFC80461F0F4

2014c *Nanchangosaurus suni* Wang, 1959

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

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.*, 2015a

Acamptonectes densus Fischer *et al.*, 2012

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

v * 2012 *Acamptonectes densus* Fischer *et al.*, 2012

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.] URN:LSID:ZOOBANK.ORG:PUB:66B3821A-1025-48DC-9C5F-7E6277FFD975

Fischer *et al.* p 3 [*Simbiskites concinnus/staffi* ammonite biozones (basal-upper Hauterivian, Lower Cretaceous, Cretaceous); 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, *Nicoraella 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 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 [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* 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.*, 2015a

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

- * 2015a *Cartorhynchus lenticarpus* Motani *et al.*, 2015a 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 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).] 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 Albian, 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

- * 1994 *Chacaicosaurus cayi* Fernández, 1994 Fernández p 293 [Les Molles Formation (early Bajocian, Middle Jurassic, Jurassic); Chacaico Sur, Patagonia, Argentina.]

2007 *Stenopterygius cayi* (Fernández, 1994)

Fernández p 277

Chaohusaurus brevifemoralis Huang *et al.*, 2019

URN:LSID:ZOOBANK.ORG:ACT:B0085E53-C6E4-4C2E-96FF-6D485D3585BA

- p 1998a *Chaohusaurus chaoxianensis* (Chen, 1985) Motani & You
 p 1998b *Chaohusaurus geishanensis* Young & Dong, 1972 Motani & You p 533
 p 2015b *Chaohusaurus chaoxianensis* (Chen, 1985) Motani *et al.* p e892011-3
 p 2017 *Chaohusaurus chaoxianensis* (Chen, 1985) Zhou *et al.* p e1343831-3
 * 2019 *Chaohusaurus brevifemoralis* Huang *et al.*, 2019 Huang *et al.* p 7 [Upper Member, Nanlinghu Formation, *Subcolumbites* Ammonoid Biozone (Spathian, Olenekian, Lower Triassic, Triassic); Majiashan, Anhui Province, China.] URN:LSID:ZOOBANK.ORG:PUB:3FA09089-C940-4499-ABBC-B48F0F70F38E

Chaohusaurus chaoxianensis (Chen, 1985)

- * 1985 *Anhuisaurus chaoxianensis* Chen, 1985 Chen p 140 [Upper Member, Nanlinghu Formation (Spathian, Olenekian, Lower Triassic, Triassic); Majiashan, Anhui Province, China.]
 * 1985 *Anhuisaurus faciles* Chen, 1985 Chen p 142 [Upper Member, Nanlinghu Formation (Spathian, Olenekian, Lower Triassic, Triassic); Majiashan, Anhui Province, China.]
 1991 *Chensaurus chaoxianensis* (Chen, 1985) Mazin *et al.* p 1207
 1991 *Chensaurus faciles* (Chen, 1985) Mazin *et al.* p 1207
 1998a *Chaohusaurus chaoxianensis* (Chen, 1985) Motani & You
 p 1998b *Chaohusaurus geishanensis* Young & Dong, 1972 Motani & You p 533
 2015b *Chaohusaurus chaoxianensis* (Chen, 1985) Motani *et al.* p e892011-3

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

- v * 2013 *Chaohusaurus zhangjiawanensis* Chen *et al.*, 2013 Chen *et al.* p 673 [Third Member, Jialingjiang Formation, *Neospathodus homeri*-*N. triangularis* Conodont Biozone (upper Spathian, Lower Triassic, Triassic); Zhangjiawan Village, Yangping Town, Yuan'an County, Hubei Province, China.]

Contectopalatus atavus (Quenstedt, 1852)

- * 1852 *Ichthyosaurus atavus* Quenstedt, 1852 Quenstedt p 129 [Wellenkalk Formation (Anisian, Middle Triassic, Triassic); Althengstett, Baden-Württemberg, Germany.]
 1891 *Mixosaurus atavus atavus* (Quenstedt, 1852) Fraas p 38 *fide* McGowan & Motani (2003, p. 67) [as *Mixosaurus atavus* var. *minor*]
 1916 *Mixosaurus atavus* (Quenstedt, 1852) von Huene p 3
 1998a *Contectopalatus atavus* (Quenstedt, 1852) Maisch & Matzke p 115
 2003 *Mixosaurus atavus* (Quenstedt, 1852) McGowan & Motani p 67

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

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
Isfordosaurus 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-AC53-4EA7-9612-230E9222A6FC

v * 1871 *Ichthyosaurus enthekiodon* Hulke, 1871 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) von Huene p 98 URN:LSID:ZOOBANK.ORG:PUB:2E316B82-8A25-43AE-A1C5-3785124EA6AE

Nannopterygius saveljeviensis (Arkhangelsky, 1997)

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

Nannopterygius yasykovi (Efimov, 1999a)

* 1999a *Yasykovia sumini* Efimov, 1999a 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.] 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) von Huene 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 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 prostaalis 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 aalenensis 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
Thalassodraco etchesi Jacobs & Martill, 2020

[URN:LSID:ZOOBANK.ORG:ACT:35626449-D5AC-4970-B76E-27A827126D23](https://zoobank.org/ACT:35626449-D5AC-4970-B76E-27A827126D23)

- v * 2020 *Thalassodraco etchesi* Jacobs & Martill, 2020  Jacobs & Martill p 7 [White Stone Band, Kimmeridge Clay Formation, *Pectinatites pectinatus* Ammonite Biozone (early Tithonian, Upper Jurassic, Jurassic); Rope Lake Bay, Kimmeridge, Dorset U.K.] URN:LSID:ZOOBANK.ORG:PUB:C1D99FF1-D4FC-4526-8E28-1B8FA64E21C0 UK GR SY932775


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 [*Epirigatites 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 = 78.3365801°N 15.8349207°E).] URN:LSID:ZOOBANK.ORG:PUB:8791DF9D-E15B-4470-A02A-F05ECC3BB7D6, *fide* Zverkov & Efimov (2019)
- 2019 *Undorosaurus gorodischensis* Efimov, 1999b Zverkov & Efimov p 1189

Undorosaurus kielanae (Tyborowski, 2016)

- * 2016 *Cryopterygius kielanae* Tyborowski, 2016 Tyborowski p 793 [Sławno Limestone Member, Kcynia Formation (uppermost Lower Tithonian = Middle Volgian, Upper Jurassic, Jurassic); Owadów-Brzezinki Quarry, Sławno (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 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, 1998b

Xinminosaurus catactes Jiang *et al.*, 2008

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