Appendix to:



The taphonomy of the Anisian of Winterswijk

- insights into a unique environment

Jelle Heijne & Edouard Grigowski

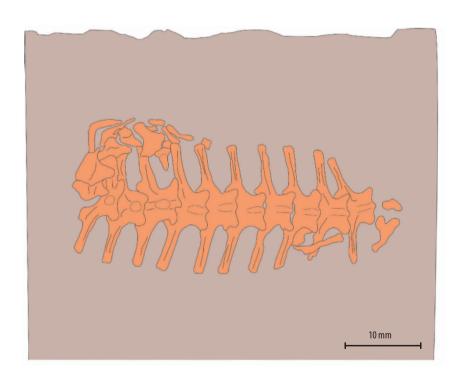


FIGURE 1. | Only articulated specimen of aff. Eusaurosphargis, AHWW-125 showing articulated neural arches. Modified after Heijne et al., 2019.

aff. Eusaurosphargis

Specimen number/collection	Preservation	Remarks
TWE 480000372	Clustered bones, very incomplete	Ribs, ?femur, neural arches
TWE 480000598	Isolated limb, disarticulated and incomplete	Humerus, radius, ulna
NMNHL RGM 449487	Scattered bones, fairly complete	Scattered bones, no skull material
CHW 107	Clustered bones, very incomplete	Vertebrae
AHWW-0125	Articulated bones,incomplete	Vertebral column
New discovery (This volume 3f)	Clustered bones with skull material, incomplete	Clustered bones with skull material

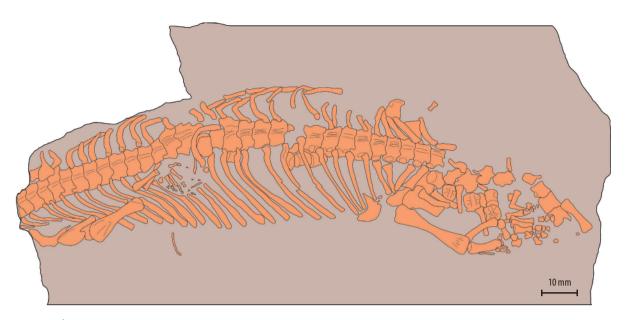


FIGURE 2. | Most complete specimen of Anarosaurus heterodontus, TWE 480000567. The skeleton is articulated and is missing only the skull and most caudal vertebrae. Modified after Heijne et al., 2019.

Anarosaurus heterodontus

Specimen number/collection	Preservation	Remarks
TWE 480000073	Clustered bones, very incomplete individual	Girdle bones, ribs, limb bone, vertebra of other
TWE 480000433	Clustered bones, very incomplete	Clavicula and ribs
TWE 480000460	Isolated skull fragment	Maxilla
TWE 480000479	Articulated trunk with limbs and girdle bones, fairly complete	WB 114 in Heijne <i>et al.</i> (2019)
TWE 480000484	Isolated skull, articulated	WB 021 in Heijne <i>et al.</i> (2019)
TWE 480000567 (StIPB-R 595)	Mostly articulated skeleton, mostly complete	Missing the caudal, cervical and cranial regions
TWE 480000569	Clustered bones, very incomplete	Femur and two articulated vertebrae
TWE 480000571	Clustered bones, very incomplete	Coracoid and ?humerus
TWE 480000575	Clustered bones, very incomplete	Rib and humerus
TWE 480000577	Clustered bones, very incomplete	Rib and vertebra
TWE 480000586	Clustered bones, very incomplete	Ribs
TWE 480000587	Clustered bones with skull material, very incomplete	Lower jaws, maxilla and vertebrae
TWE 480000588	Articulated partial skeleton, incomplete	Articulated partial trunk
TWE 480000591	Clustered bones, very incomplete	Humerus, rib, vertebrae
TWE 480000592	Scattered bones, very incomplete	Femur and two unidentified limb bones
TWE 480000594	Isolated limb, articulated femur-tibia	Femur, tibia and autopodial bones
TWE 480000599	Clustered bones with skull material, very incomplete	Skull bones, ?lower jaw, rib, vertebrae
Wijk06-01	Isolated skull fragment	Lower jaw
Wijk06-38	Isolated limb, disarticulated	Femur, tibia, fibula, metatarsals
Wijk06-266	Isolated limb, mostly disarticulated	Femur, tibia, fibula
Wijk08-73	Isolated limb, disarticulated	Tibia, autopodial bones
Wijk09-582	Isolated limb, mostly disarticulated	Femur, tibia, autopodial bones
Wijk09-585	Remains with articulated vertebral column, including skull material, incomplete	Skull and lower jaws, vertebrae, ribs
Wijk10-27	Clustered skull bones, very incomplete	Lower jaws and skull fragments
Wijk10-395	Isolated skull fragment	Lower jaw
Wijk10-536	Articulated forelimb clustered with girdle bones, incomplete	Scapulae, coracoidea, ribs, humerus, radius, ulna, metacarpal
		•

NMNHL RGM 443855	Articulated trunk with skull, incomplete	Articulated skull located between the ribs
NMNHL RGM 443856	Isolated skull with lower jaws	
NMNHL RGM 443857	Clustered remains, incomplete	Skull clustered with pectoral girdle und humeri
NMNHL RGM 443858	Articulated partial skeleton, fairly complete	Skull, vertebrae, ribs, left fore limb
NMNHL RGM 449487	Isolated skull fragment	Posterior partial skull
NMNHL St 449486	Isolated skull with lower jaws	
StIPB-R 594(Cast)	Articulated partial skeleton with scattered bones, fairly complete	Skull, lower jaws, vertebrae, ribs, pectoral girdle, forelimb
StIPB-R 596(Cast)	Articulated partial skeleton with disarticulated skull, fairly complete	Skull, lower jaws vertebrae, pectoral girdle, fore limbs
CHW 068	Clustered bones, very incomplete	Rib, vertebra, pubis
CHW 186	Scattered skeleton with associated hind limb, very incomplete	Slightly articulated skull, hind limb, vertebrae, gastralia, ribs
CHW 187	Scattered skeleton, incomplete	Skull bones, lower jaws, girdle bones, limb bones, vertebrae, ribs
CHW 188	Clustered bones, very incomplete	Vertebrae, ribs, gastralia, ischium
CHW 189	Articulated partial skeleton, fairly complete cervical ribs, pectoral girdle, left fore limb, ribs	Partial skull, cervical vertebrae (in articulation),
CHW 190	Slightly articulated trunk with disarticulated skull, incomplete	Skull, vertebrae, ribs, coracoid
CHW 191	Clustered skeleton, fairly complete	Skull fragments, lower jaws, gastralia, ribs, vertebrae, scapula, humerus
CHW 192	Scattered bones, incomplete	Vertebrae, ribs
CHW 203	Disarticulated skull	
THW 204	Isolated skull fragment	Lower jaw
THW 205	Disarticulated skull	
THW 206	Isolated skull fragment	Anterior lower jaw
CHW 208	Isolated skull fragment	Anterior lower jaw
CHW 209	Isolated skull fragment	Parietal
CHW 212	Both lower jaws (Disarticulated)	
CHW 213	Clustered bones, very incomplete	Disarticulated skull, femur, neural arch
CHW 214	Isolated limb, disarticulated	Femur, fibula
CHW 218	Isolated limb, semi-articulated	Femur, tibia, fibula, autopodial bones
CHW 219	Isolated limbs, articulated	Slightly articulated autopodia, radius, ulna
CHW 220	Isolated limb, articulated	Articulated autopodium, vertebra
CHW 221	Isolated limb, semi-articulated	Radius, ulna, autopodium
CHW 227	Isolated limb, semi-articulated	Tibia, fibula, autopodium
CHW241	Isolated hind limbs, scattered bones, very incomplete	One hind limb articulated, one disarticulated, scattered bones of other individual
CHW 268	Articulated skull	With lower jaws
CHW 269	Articulated partial skull	With right lower jaw
CHW 299	Scattered bones, very incomplete	Disarticulated skull, lower jaw, cervical ribs, vertebrae, neural arches, ?limb bone
CHW 311	Scattered bones with articulated skull	Skull with lower jaws, ?hind limb, vertebra
CHW 312	Clustered skeletons with articulated skull, incomplete- very incomplete	Three individuals, skull bones, lower jaws, vertebrae, ribs, girdle bones, limb bones
CHW 313	Scattered bones with partially articulated skull, incomplete	Skull, lower jaw, vertebrae, neural arches, ribs
CHW 321/323/325	Isolated limb with scattered bones, very incomplete	Articulated humerus+Radius+Ulna (321)+ Vertebrae+Neural arches+Ribs (323/325)
CHW 322	Clustered bones, very incomplete	Humerus, gastral rib, clavicula
CHW 327	Clustered bones with articulated skull,	Skull with lower jaws, pubis, gastralia, ribs. Skul
	very incomplete	I and postrcranium most likely two individuals

CHW 335	Isolated limb, articulated	Radius, ulna, autopodium
CHW 339	Articulated trunk, fairly complete	Vertebrae, ribs, possible fish remains
CHW 343	Isolated limb, mostly articulated	Femur, tibia, fibula, autopodium
CHW 344	Articulated vertebral column with clustered bones, incomplete	Vertebral column with clustered ribs and a large neural arch (other individual)
CHW 345	Articulated trunk with disarticulated skull,	Skull, ?lower jaw, vertebrae, neural arches, ribs, ischium
CHW 392	fairly complete	Scapula and coracoid
CHW 439	Clustered bones, very incomplete Isolated disarticulated skull with lower jaws	Scapula and Coracold
CHW 455	Scattered bones, very incomplete	Vertebrae of two individuals
CHW 460	Clustered bones, very incomplete	Humerus, neural arches, ribs
CHW 461	Clustered bones, very incomplete	Coracoids, ?ulna, ribs, gastralia, vertebrae
CHW 462	Clustered bones, very incomplete	Ilium and vertebra
CHW 463	Isolated limb	
CHW 575		Femur, tibia, tarsal bone, fish remains
CHW 621	Isolated skull fragment	Anterior lower jaw ?Maxilla
CHW 634	Isolated skull fragment Articulated trunk	Very small ribs and neural arches, embryonal?
CHW 642		Vertebrae, neural arches, ribs, limb bones
OS 999	Clustered bones, incomplete	Humerus, ?ulna
JLW 104	Isolated limb, disarticulated Isolated limb, articulated	·
JLW 104 JLW 112	Isolated skull, articulated	Femur, tibia, fibula, autopodium
		Disarticulated chall famur is shium
JLW 209	Clustered bones with partial skull, very incomplete	Disarticulated skull, femur, ischium, clavicula and scapula of other individual
JLW 216	Clustered bones with partial skull, very incomplete	Disarticulated skull and lower jaws, vertebrae, limb bones
JLW 217	Isolated skull fragment	Anterior lower jaw
CJL1	Articulated vertebral column with skull remains, incomplete	Lower jaw, vertebrae, neural arches, ribs, fish skull
CJL 2	Clustered bones with partial skull, very incomplete	Disarticulated skull, lower jaw, humerus
CJL 3	Articulated trunk with hind limbs, fairly complete	Vertebrae, neural arches, ribs, femora, tibiae, autopodial bones
CJL 4	Isolated articulated skull clustered with large remains	Large remains of different taxon
CJL 5	Articulated trunk clustered with larger vertebrae, incomplete	Vertebrae, neural arches, ribs. Larger vertebrae of other individual
CJL 6	Clustered bones, incomplete	Girdle bones, limb bones, ribs, gastralia, vertebrae
CJL7	Scattered bones, very incomplete	Femur, ?tibia, ?fibula, clavicula, vertebra, ribs, gastralia
CJL 8	Isolated limb, articulated clustered with large neural arch	Femur, tibia, fibula, autopodium. Neural arch of other taxon.
CJL 10	Articulated vertebral column with clustered bones, incomplete	Vertebrae, neural arches, cervical ribs, dorsal ribs, humerus
CJL 11	Clustered bones with skull material, incomplete ribs, vertebrae, neural arches	Partial skull, lower jaw, scapulae, interclavicula,
CJL 15	Isolated limb and vertebra, disarticulated, very incomplete	Femur, tibia, fibula, vertebra
CJL 16	Isolated limb, disarticulated	?Radius, ?ulna, autopodium
CJL 17	Isolated limb, articulated	Humerus, radius, ulna
CJL 18	Isolated limb, disarticulated	Femur, tibia, fibula, autopodial bone
CJL 19	Clustered skeleton, inclomplete	Girdle bones, vertebrae, ribs, gastralia, femur, ?tibia, ?fibula

CJL 20	Isolated articulated skull with scattered bones, very incomplete	Scattered bones, including lower jaws, of smaller individual
CJL 21	Articulated trunk with cliustered bones, incomplete	Vertebrae, neural arches, ribs, pubis
CJL 22	Isolated skull fragment	Complete mandible
CJL 23	Isolated skull fragment	Lower jaw
CJL 30	Isolated skull, articulated	Incomplete anterior skull
CJL 31	Isolated skull, articulated	Incomplete skull + lower jaw
CJB 2	Partial skull with clustered bones, incomplete	Skull, humerus, vertebrae, ribs
CJB 3	Articulated vertebral column with clustered bones, incomplete	Vertebrae, ribs, ?clavicula, ?ilium
CJB 4	Isolated skull fragments	Two dentaries (Same individual)
CJB 5	Isolated skull, articulated	Complete skull in lateral view
CJB 6	Isolated skull, disarticulated	Partial disarticulated skull in lateral view
WB 001	Isolated skull, articulated	
WB 010	Isolated limb, semi-articulated	Humerus, ulna
WB 022	Isolated limb, articulated	Tibia, fibula, autopodium
WB 084	Isolated limb, articulated	Femur, tibia, fibula, autopodium
CJ 291	Isolated limb, articulated	Humerus, radius, ulna
CJ 345A	Isolated skull fragment	Left posterior lower jaw
CML 1	Isolated limb, disarticulated	Femur, fibula, autopodium
HOA 30	Isolated limb, articulated	Femur, tibia, fibula, autopodium
HOA 143	Isolated skull, articulated	Skull and lower jaws in lateral view
HOA 144	Isolated skull, articulated	
HOA 155	Clustered bones, very incomplete	Femur, tibia, lower jaw
HOA 250	Clustered skeleton, incomplete	Disarticulated skeleton with articulated skull (Unprepared)
HOA 481	Isolated skull fragment	Left lower jaw
CCP 1	Isolated skull fragment	Complete mandible
CGS 1	Isolated skull, articulated	
CBW 7	Clustered skeleton, incomplete	Disarticulated skeleton (?Skull elements, lower jaw, pubis, vertebrae ribs)



FIGURE 3. | Best articulated and one of the most complete specimens of cf. Cymatosaurus from Winterswijk. The specimen, in the private collection of O.J. Sichelschmidt (OS 888) is stored as a cast as StIPB-R 645. Apart from the skull, most bones are present. Modified after Heijne et al., 2019

cf. Cymatosaurus

Specimen number/collection	Preservation	Remarks
TWE 480000441	Scattered bones, very incomplete autopodial bones	Humerus, sacral ribs, rib, vertebrae, gastral rib,
NMNHL RGM 445912	Clustered skeleton, in approximate articulation, nearly complete	Most elements present, except for skull material
StIPB-R 645 (Cast of OS888)	Partially articulated skeleton, nearly complete	Most elements present, except for skull material
StIPB-R 646 (Cast of CMLW 039)	Clustered skeleton, fairly complete	Ribs, vertebrae, humeri, other limb bones, ischium, coracoid, gastralia, mandible fragments
CRH 1	Scattered bones, very incomplete	Humerus, scapulae, ribs, skull material (see , this issue)
H0 142	Clustered bones, incomplete	Semi-articulated pectoral girdle, humerus, vertebrae, neural arches, ribs

Eosauropterygia indet.

Specimen number/collection	Preservation	Remarks
TWE 480000086	Isolated limb, disarticulated	?Fibula, autopodial bones
TWE 480000420	Clustered bones, very incomplete	Coracoid, rib
TWE 480000421	Scattered bones, very incomplete	Scapula, clavicula, gastral rib, ?coracoid
TWE 480000422	Clustered bones, very incomplete	lschium, caudal rib, gastral rib
TWE 480000423	Scattered bones, very incomplete	Coracoid, pubis, gastralia
TWE 480000426	Clustered bones, very incomplete	Vertebrae, ?caudal rib, gastralia
TWE 480000519	Clustered bones, very incomplete	Ribs, neural arches, limb bone
TWE 480000568	Clustered bones, very incomplete	Vertebrae
TWE 480000572	Clustered bones, very incomplete	Vertebrae
TWE 480000573	Clustered bones, very incomplete	Vertebrae, neural arches, rib of ?Amotosaurus
TWE 480000576	Clustered bones, very incomplete	Vertebrae, neural arches, ribs
TWE 480000583	Clustered bones, very incomplete	Ribs
TWE 480000585	Isolated limb, disarticulated	Tibia, fibula, autopodium
TWE 480000593	Isolated limb, disarticulated	Tibia, fibula, autopodial bone
TWE 480000595	Clustered bones, very incomplete	Ribs
TWE 480000597	Clustered bones, very incomplete	Scapula, coracoid, clavicula, vertebra
CHW 118	Articulated vertebrae, very incomplete	Unprepared vertebral centra
CHW 130	Clustered bones, very incomplete	Scapula, rib, ?sacral rib
CHW 210	Clustered bones, very incomplete	Rounded, weathered bones
CHW 238	Isolated limb, disarticulated	Femur, tibia
CHW 240	Clustered bones, very incomplete	Coracoidea, vertebrae, ribs, gastralia
CHW 316	Isolated limb, mostly disarticulated	Autopodial bones
CHW 317	Isolated limb, disarticulated	Tarsal bones, ?distal tibia
CHW 337	Scattered bones, very incomplete	Rib, scapula
CHW 426	Articulated vertebrae, very incomplete	Unprepared, at least 4 vertebrae
CHW 466	Clustered bones, very incomplete	Vertebrae
CHW 519	Isolated limb, disarticulated	?Radius, ?metacarpal, vertebra
CHW 633	Scattered bones, very incomplete	Femur, neural arch
CHW 638	Articulated trunk with clustered bones, incomplete	Vertebrae, neural arches, ribs, gastralia
0\$959	Clustered bones, very incomplete	Vertebrae, neural arches
OS1109	Clustered bones, very incomplete	Ribs
JLW 129	Isolated limb, articulated	Femur, tibia, fibula, autopodium
CJL 9	Clustered bones, very incomplete	Vertebrae, clavicula
CJL 12	Clustered bones, very incomplete	Ribs

CJL 13	Isolated limb, disarticulated	Autopodial bones
CJL 14	Isolated limb, disarticulated	Autopodial bones
CWB 1	Isolated limbs, disarticulated	Femora, ?fibula
CJ 257	Isolated skull fragment	Splenial
CJ 405A	Isolated limb, semi-articulated	Femur, tibia, fibula, autopodium
HOA 7	Clustered bones, very incomplete	Vertebrae, neural arches
HOA 170	Articulated neural arches, very incomplete	Two neural arches
CHO 4	Articulated gastralia, incomplete	Gastralia

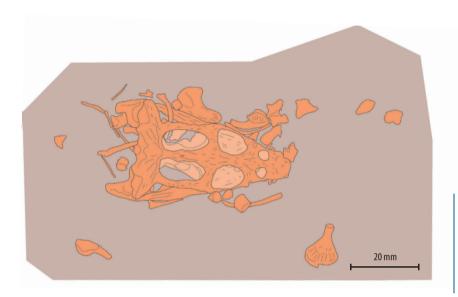


FIGURE 4. | Holotype and most complete specimen of Lariosaurus vosseveldensis TWE 480000504. The clustered bones consist of a skull with lower jaws, some girdle bones, vertebrae, neural arches, ribs and gastralia. Modified after Heijne et al., 2019

Lariosaurus vosseveldensis

Specimen number/collection	Preservation	Remarks
TWE 480000504	Articulated skull with clustered bones, very incomplete	Skull, girdle bones, ribs, vertebrae- holotype-
TWE 480000505	Isolated skull bone	Parietal

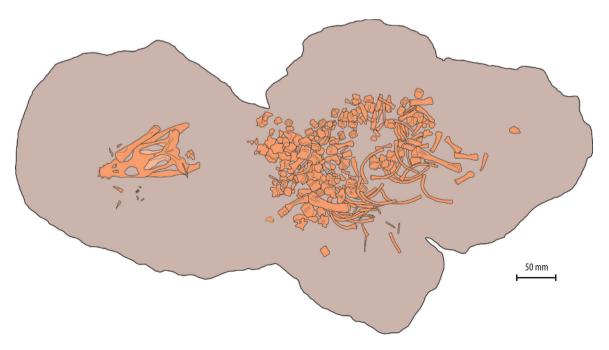


FIGURE 5. | Most complete specimen of Nothosaurus marchicus, TWE 480000473. The specimen is almost fully disarticulated, and lacks only the bones of the pelvic girdle. Hower, it is possible that these are still embedded in the sediment. Modified after Heijne et al., 2019.

Specimen number/collection	Preservation	Remarks
TWE 480000127	Clustered bones, very incomplete	Ischium, ?posterior lower jaw
TWE 480000133	Scattered bones, incomplete	Unprepared
TWE 480000375	Isolated skull, articulated	
TWE 480000376	Isolated skull, articulated	
TWE 480000377	Isolated skull, articulated	Partial skull (Posterior)
TWE 480000378	Isolated skull, articulated	Missing the anterior premaxilla
TWE 480000384	Clustered bones, very incomplete	Sacral and caudal rib
TWE 480000391	Isolated skull fragment	Anterior lower jaw
TWE 480000416	Articulated pectoral girdle	Claviculae, interclavicula, scapula
TWE 480000418	Clustered bones, incomplete	Coracoidea, ribs, vertebrae, neural arches,
1112 100000110	clustered borres, incomplete	gastralia
TWE 480000419	Clustered bones, incomplete humerus, ?radius, ?ulna	Ribs, vertebrae, neural arches scapula, coracoid,
TWE 480000443	Scattered bones, very incomplete metatarsal	Femora, tibia, fibula, vertebrae, neural arches,
TWE 480000447	Clustered bones, very incomplete	Vertebrae, neural arches, caudal ribs
TWE 480000456	Isolated skull fragment	Anterior lower jaw
TWE 480000457	Isolated skull fragment	Anterior lower jaw
TWE 480000458	Isolated skull fragment	Anterior lower jaw
TWE 480000459	Isolated skull fragment	Anterior lower jaw
TWE 480000473	Clustered skeleton, nearly complete	All elements present except some girdle bones
TWE 480000474	Isolated skull, articulated	Lower jaws detached
TWE 480000475	Clustered skeleton, incomplete arches, ribs, gastralia	Coracoids, scapula, humerus, vertebrae, neural
TWE 480000574	Clustered bones, very incomplete	Rib, autopodial bone
TWE 480000578	Clustered bones, very incomplete	Vertebra, neural arch, caudal rib
TWE 480000581	Scattered bones, very incomplete	Rib fragments
TWE 480000582	Scattered bones, very incomplete	Rib, vertebra
TWE 480000584	Clustered bones, very incomplete	Caudal ribs
TWE 480000589	Clustered bones, very incomplete	Scapula, coracoid
TWE 480000590	Articulated gastralia, very incomplete	
TWE 480000596	Scattered bones, very incomplete	Rib fragment, half a neural arch
Wijk06-77 (+06-83)	Clustered bones, very incomplete	Ribs, gastralia
Wijk07-125	Isolated limb, disarticulated	Fibula, autopodial bones
Wijk08-1	Clustered bones, very incomplete	Pubis, ischium, interclavicula, gastralia
Wijk08-96	Articulated vertebral centra, very incomplete	Two vertebrae
Wijk09-157	Clustered bones, very incomplete	Autopodial bones, rib
Wijk09-445	Isolated skull fragment	Posterior lower jaw
Wijk10-60	Clustered bones, very incomplete	Gastralia
Wijk10-522	Isolated skull fragment	Posterior lower jaw
Wijk10-531	Isolated skull fragment	Both lower jaws
Wijk13-249	Isolated skull fragment	Posterior lower jaw
NMNHL St 87289	Articulated partial skeleton, fairly complete	Vertebrae, neural arches, ribs, humerus, scapula, ?coracoid, radii, ulnae, autopodial bones
NMNHL St 445530	Isolated skull, articulated	Complete skull
NMNHL St 445913	Isolated skull fragment	Incomplete lower jaw
NMNHL St 447170	Isolated skull fragment	Lower jaw
NMNHL St 447135	Clustered skeleton (elongate), fairly complete	Mostly ribs and vertebrae, femur, coracoid (CHK 1 in Heijne <i>et al.</i> 2019)
NMNHL St 449995	Isolated skull, articulated	Left partial skull

StIPB-R 647 (Cast of JLW 102)	Partially articulated skeleton, mostly complete	Most elements present, skull missing anterior half
CHW 172	Scattered bones, very incomplete	Caudal rib, gastral rib
CHW 181	Clustered bones, very incomplete	Ribs
CHW 184	Clustered bones, very incomplete	Ribs
CHW 185	Scattered bones, very incomplete	Ribs
CHW 193	Isolated skull fragment	?Postorbital
CHW 196	Isolated skull fragment	Posterior skull fragment
CHW 197	Isolated skull fragment	Posterior skull fragment
CHW 199	Isolated skull fragment	Right anterior lower jaw
CHW 200	Isolated skull fragments	Disarticulated lower jaws
CHW 201	Isolated skull fragment	Articulated lower jaws
CHW 202	Isolated skull fragment	Left anterior lower jaw
CHW 207	Isolated skull fragment	Badly preserved anterior lower jaws (Articulated)
CHW 239	Clustered bones, very incomplete	Humerus, rib fragment
CHW 307	Scattered bones, very incomplete	Coracoid, ?tibia
CHW 308	Clustered skeleton with articulated vertebrae,	Vertebrae, neural arches, ribs, humerus
CITW 500	fairly complete	vertebrae, neural arches, ribs, numerus
CHW 423	Clustered bones, very incomplete	Scapula, neural arch
CHW 425	Clustered bones, very incomplete	Neural arches, cervical rib, gastral rib
CHW 437	Isolated skull fragment	Left anterior lower jaw
OS1103	Clustered bones, very incomplete	Ribs, vertebrae
OS1108	Clustered bones, very incomplete	Rib, vertebrae
JLW 26	Clustered bones, very incomplete	Ischium, rib
JLW 200	Isolated skull fragment	Articulated lower jaws
JLW 252	Isolated skull fragment	Posterior lower jaw
JLW 300	Clustered skeleton, fairly complete	Articulated skull, lower jaw, humeri, femora, limb bones, clavicula, vertebrae, neural arches, ribs, sacral ribs, caudal ribs, gastralia
CJL 24	Isolated skull fragment	Anterior lower jaw
CJL 25	Isolated skull fragment	Anterior lower jaw
CJL 26	Isolated skull fragment	Anterior lower jaw
CJL 27	Isolated skull fragment	Posterior lower jaw
CJL 28	Isolated skull fragment	Posterior lower jaw
CJL 29	Isolated skull fragment	Posterior lower jaw
CRB 1	Articulated vertebral column, incomplete	Vertebrae, neural arches, caudal ribs
CRB 2	Isolated skull fragment	Distal lower jaw
WB 049	Isolated skull fragment	Right lower jaw
WB 053	Clustered bones, very incomplete	Clavicula, scapula
CWB 2	Isolated skull fragment	Pterygoid
CWB 3	Isolated skull fragment	Parietal
AHWW-0212	Articulated sacral neural arch-rib	railetai
		Compression of the compression o
AHWW-0300	Scattered bones, unprepared	Femur, fibula, vertebrae, neural arches, ribs
CJ 334B	Isolated skull fragment	Right lower jaw
(C)1	Isolated skull, articulated	Partial skull with lower jaw
CD01	Isolated skull, articulated	Posterior skull
CB0 1	Isolated skull, articulated	Complete skull
H0 164	Clustered bones with lower jaws, very incomplete	Lower jaws, rib, caudal rib, gastral rib
HOA 2	Clustered bones, very incomplete	Vertebrae, ribs
HOA 164	Articulated vertebrae, very incomplete	Three vertebrae
HOA 352	Isolated skull fragment	Anterior lower jaw
HOA 363	Clustered bones, very incomplete	Coracoidea, ribs, gastralia

HOA 371	Clustered bones, very incomplete	Pubis, clavicula, ribs, gastralia
HOA 428	Isolated skull fragment	Fragment of pterygoid
HOA 468	Isolated skull, articulated	Partial skull (Right upper temporal region)
H0A623	Isolated skull fragment	Lower jaw
H0A706	Isolated skull, articulated	Anterior partial skull
CHO 1	Clustered bones, very incomplete	Coracoid,?humerus,?ulna, neural arches, autopodial bone
CHO 3	Isolated skull fragment	Anterior lower jaw
CHO 5	Isolated limb, disarticulated	Humerus, radius, ulna
CBW 1	Isolated skull fragment	Premaxilla
CBW 2	Isolated skull fragment	Premaxilla
CBW 3	Isolated skull fragment	Dentary
CBW 4	Isolated skull fragment	Posterior lower jaw
CBW 5	Isolated skull fragment	Posterior lower jaw
CBW 6	Clustered bones, incomplete	Vertebrae, neural arches, ribs
CBW 8	Isolated skull fragment	Incomplete premaxilla
CBW 9	Clustered bones, incomplete	Vertebrae, neural arches, ribs

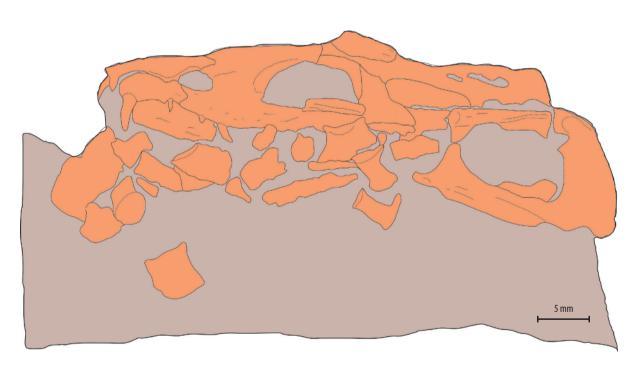


FIGURE 6. | Holotype and only specimen of Nothosaurus winkelhorsti, NMNHL RGM 443825. The skull is clustered with some vertebrae, possibly of the same individual. Modified after Heijne et al., 2019

Nothosaurus winkelhorsti

Specimen number/collection	Preservation	Remarks
NMNHL RGM 443825	Clustered bones with skull material,	Holotype, Klein & Albers, 2009
	very incomplete	Mostly articulated skull with partial lower jaw
	and clustered vertebrae,	



FIGURE 7. | Holotype and most complete specimen of Palatodonta bleekeri, TWE 480000470. It is preserved as an isolated skull. So far, no postcranium is known. Redrawn after Neenan et al., 2013.

Palatodonta bleekeri

Specimen number/collection	Preservation	Remarks
TWE 480000470	Isolated skull, articulated	Holotype, Neenan <i>et al.</i> 2013. Mostly articulated skull and lower jaws.
CHW 570	Isolated skull fragment	Premaxilla
CHW 641	Isolated skull fragment	Premaxilla

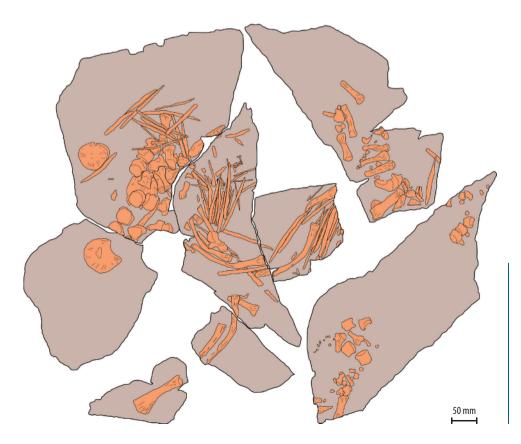


FIGURE 8. | Holotype and only specimen of Pararcus diepenbroeki. The slabs that are not connected are arranged for photographic purposes only, as the exact alignment is not known. Only postcranial material is known, and the slab mainly contains ribs, vertebrae and gastralia, as well as some limband girdle bones.

Pararcus diepenbroeki

Specimen number/collection	Preservation	Remarks
TWE 480000454	Clustered skeleton, fairly complete	Holotype, Klein & Scheyer, 2014 No skull material, mostly ribs, vertebrae and gastralia, girdle bones, limb bones

Placodus sp.

Specimen number/collection	Preservation	Remarks
CHW 086	Isolated skull bone	Lower jaw

Collection acronyms:

NMNHL: (RGM, St and Wijk) Naturalis Biodiversity Center, Leiden, The Netherlands

StIPB Steinmann Institute, Division of Paleontology, University of Bonn, Bonn, Germany

TWE Museum TwentseWelle (Now De Museumfabriek), Enschede, The Netherlands

CCJ Private collection of Charles de Jong.

CHW Private collection of Herman Winkelhorst.

CMLW/CML Private collection of Marco Liebrand (currently housed at Naturalis).

WB/CWB Private collection of Wim Berkelder (mostly housed at TwentseWelle).

HOA/CHO Private collection of Henk Oosterink.

JLW/CJL Private collection of Jos Lankamp.

OS Private collection of Oliver J. Sichelschmidt.

AHWW Private collection of Adam Haarhuis.

CBO Private collection of Ben Oostendorp.

CBW Private collection of Bernd Wolfering.

CCP Private collection of Cornelis Put.

CGS Private collection of Guido Spanjaard.

CJB Private collection of Jan van den Berg.

CRB Private collection of Remco Bleeker.

CRH Private collection of Richard de Haan.

REFERENCES

- Heijne, J., N. Klein & P.M. Sander., 2019. The uniquely diverse taphonomy of the marine reptile skeletons (Sauropterygia) from the Lower Muschelkalk (Anisian) of Winterswijk, The Netherlands; Paläontologische Zeitschrift 93, pp. 69-92. doi: 10.1007/s12542-018-0438-0
- Klein, N. & P. Albers., 2009. A new species of the sauropsid reptile Nothosaurus from the Lower Muschelkalk of the western Germanic Basin, Winterswijk, the Netherlands. Acta Palaeontologica Polonica 54, pp. 589-598. doi: 10.4202/app.2008.0083.
- Klein, N. & T.M. Scheyer., 2014. A new placodont sauropterygian from the Middle Triassic of the Netherlands. Acta Palaeontologica Polonica 59, pp. 887-902. doi: 10.4202/app.2012.0147.
- Klein, N., D.F.A.E. Voeten, A. Haarhuis & R.W. Bleeker. 2016. The earliest record of the genus Lariosaurus from the early middle Anisian (Middle Triassic) of the Germanic Basin. Journal of Vertebrate Paleontology 36: e1163712. doi: 10.1080/02724634.2016.1163712.
- Neenan, J.M., N. Klein & T.M. Scheyer. 2013. European origin of placodont marine reptiles and the evolution of crushing dentition in Placodontia. Nature Communications 4: 1621. doi: 10.1038/ncomms2633.