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W.A. Lindholm's contributions to herpetology with an annotated bibliography of his herpetological publications

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ABSTRACT

This paper presents notes on the herpetological biography of W.A. Lindholm (1874–1935), a Russian-Soviet zoologist known mostly by his contributions to malacology and herpetology. His 15 herpetological publications, which are annotated in this paper, include naturalistic observations of amphibians and reptiles, commentaries on the catalogue of reptiles and amphibians from the collection of the Museum Wiesbaden, descriptions of new taxa of lizards, snakes, and turtles, revision of the classification of Recent turtles and studies on the nomenclature of some amphibians and reptiles. This paper also contains a list of 21 reptilian taxa introduced by Lindholm and a list of four reptilian taxa named in honour of him.

Key words: amphibians, bibliography, herpetology, reptiles, W.A. Lindholm

Вклад В.А. Линдгольма в герпетологию с аннотированной библиографией его герпетологических публикаций

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РЕЗЮМЕ

Статья представляет замечания по герпетологической биографии В.А. Линдгольма (1874–1935), российского-советского зоолога, известного главным образом своим вкладом в малакологию и герпетологию. Его 15 герпетологических публикаций, которые аннотированы в статье, включают натуралистические наблюдения за амфибиями и рептилиями, комментарии к каталогу рептилий и амфибий из коллекции Музея Висбадена, описания новых таксонов ящериц, змей и черепах, ревизию классификации современных черепах и исследования по номенклатуре некоторых земноводных и пресмыкающихся. В статье также содержится список, включающий 21 таксон рептилий, предложенных Линдгольмом, и список из четырех таксонов рептилий, названных в его честь.

Ключевые слова: амфибии, библиография, герпетология, рептилии, В.А. Линдгольм

INTRODUCTION

Wilhelm (Wasili, Wassili or Vassily) Adolf (Adolfovich or Adolfovitch) Lindholm (1874–1935) was a Russian-Soviet zoologist known mostly by his contributions to malacology and herpetology. Lind-

holm's biography and malacological studies were recently thoroughly analyzed by Vinarski (2019a, b), whereas the only publication devoted to his herpetological studies is a short article by Adler (2012) in his "Contributions to the History of Herpetology." Adler (2012) stated that there are 15 herpetological

titles of Lindholm, but they have never been listed or reviewed. This paper aims to consider Lindholm's contributions to herpetology in more detail based on new biographical data (Vinarski 2019a) and provides an annotated bibliography of his 15 herpetological publications, of which two represent just short supplements to other papers (see below). In addition, this paper includes a list of 21 reptilian taxa introduced by Lindholm and a list of four reptilian taxa named in honour of him. The fossil taxa are marked by a special sign (†). The current names of the Recent taxa mentioned in the text are given after Frost (2019) for amphibians, Uetz et al. (2019) for reptiles, except turtles, and Rhodin et al. (2017) for turtles.

NOTES ON HERPETOLOGICAL BIOGRAPHY OF W.A. LINDHOLM

Lindholm made his first collections of amphibians and reptiles as well as observations on their natural history in the vicinities of Orenburg (Kargalinskaya Steppe) and Novy Oskol, where he lived in 1893–1898 (Vinarski 2019a). Later these observations resulted in three herpetological publications (Lindholm 1902a–c).

In 1900, Lindholm went to Germany, where he made an acquaintance with three scientists: Oskar Boettger (1844–1910), the Frankfurt museum's Curator of Herpetology, who became Lindholm's teacher in both herpetology and malacology; Wilhelm Kobelt (1840–1916), who included Lindholm's essay on the animals of Kargalinskaya Steppe in his book on zoogeography (Lindholm 1902a); and Eduard Lampe, a curator of the "Naturhistorischen Museums zu Wiesbaden" (hereinafter Museum Wiesbaden), who allowed Lindholm to work as a volunteer with the herpetological collections there. This work led to publication of two parts of the catalogue of reptiles and amphibians from the collections of the Museum Wiesbaden by Lampe, with remarks (extensive scientific commentaries) on some specimens by Lindholm, including description of a new lizards species *Lygosoma (Liolepisma) pagenstecheri* and two new snake species *Helicops carinicauda* var. *triserialis* and *Prosymna (Pseudoprosymna) bergeri* (Lindholm 1901; Lampe and Lindholm 1902). Later from the same collections, he described a new genus and species of snake (*Dipsadophidium weileri*) from Cameroon (Lindholm 1905a), new specimens of lizards and snakes from German New Guinea (now part

of Papua New Guinea; Lindholm 1905b, c), including a new genus and species of lizard (*Alopecosaurus cuneirostris*) and a new species of snake (*Stegonotus diehli*), and a new species of turtle *Homopus bergeri* from German South-West Africa (Namibia; Lindholm 1906).

In 1907, Lindholm moved to Moscow, where from 1909 to 1913 he was a volunteer (not "on the staff", contra Adler 2012: 189) at the Zoological Museum of Moscow Imperial University (now Moscow State University; see Vinarski 2019a) and, according to Adler (2012: 189), "continued publishing on reptiles and molluscs", although I did not manage to find any Lindholm herpetological publication of this period in the "Zoological Record". Lampe (1911) in his supplement to the catalogue of reptiles and amphibians from the collections of the Museum Wiesbaden thanked Lindholm for his help in work with the collections and A.M. Nikolsky (1858–1942), a Russian-Soviet zoologist and herpetologist, for donation of some specimens to the collection of the Museum Wiesbaden via Lindholm. On the other hand, a collection book of the Zoological Museum of the Imperial Academy of Sciences (now Zoological Institute of the Russian Academy of Sciences) in Saint Petersburg contains a record about collections of amphibians from Wiesbaden received as a donation from Lindholm in 1903. Another evidence of the herpetological activity of Lindholm at this time are collections of lizards made by him in Crimea in 1913 (see Doronin 2012). These lizards were later named "*Lacerta saxicola lindholmi*" [a nomen nudum] by Lantz and Cyrén (1936).

Beginning in 1914 Lindholm became a Senior Zoologist (primarily a Senior Zoologist out of the staff, then a Junior Zoologist on the staff and only later a Senior Zoologist on the staff) at the Zoological Museum of the Imperial Academy of Sciences in Saint Petersburg and for two decades was occupied by studies of molluscs (Vinarski 2019a, b). In 1924, after a long break, he published a short herpetological paper on a "forgotten" frog *Rana canagica* described by Pallas [1814] from the Aleutians of Alaska (Lindholm 1924).

A peak of his herpetological activity was achieved in 1929, when three big papers and a small additional note on the nomenclature of amphibians and reptiles were published by Lindholm (1929a–d). In two of these papers Lindholm (1929a, b) corrected names of 13 lizard and snake taxa of Europe in response to the list of amphibians and reptiles of Europe by Mertens

Table 1. Names of lizard, snake and frog taxa from Mertens and Müller (1928) as corrected by Lindholm (1929a*, b**, d***) and as in current usage. The correct year of some Pallas's taxa is given in square brackets (see text).

No.	Taxon name in Mertens and Müller (1928)	Taxon name in Lindholm (1929a*, b**, d***)	Current name (Frost 2019; Uetz et al. 2019)
1	<i>Ablepharus kitaibelii</i> Bibron et Bory, 1833	<i>Ablepharus pannonicus</i> Fitzinger, 1824*	<i>Ablepharus kitaibelii</i> Bibron et Bory, 1833
2	<i>Alsophylax microtis</i> (Blanford, 1875)	<i>Alsophylax pipiens</i> (Pallas, 1811)*	<i>Alsophylax pipiens</i> (Pallas, 1827) [1814]
3	<i>Alytes obstetricans obstetricans</i> (Laurenti, 1768); <i>Alytes obstetricans boscai</i> Lataste, 1879	<i>Alytes campanisonus campanisonus</i> (Laurenti, 1768) = <i>Bufo obstetricans</i> Laurenti, 1768 (nomen nudum)***, = <i>Alytes campanisonus boscai</i> Lataste, 1879; <i>Alytes campanisonus boscai</i> Lataste, 1879***	<i>Alytes obstetricans</i> (Laurenti, 1768) = <i>Alytes campanisonus boscai</i> Lataste, 1879; <i>Rana temporaria</i> Linnaeus, 1758 = <i>Rana campanisona</i> Laurenti, 1768
4	<i>Agama aralensis</i> Lichtenstein, 1823	<i>Agama sanguinolenta</i> (Pallas, 1811)*	<i>Trapelus sanguinolentus aralensis</i> (Lichtenstein, 1823)
5	<i>Coluber viridi-flavus viridi-flavus</i> Lacépède, 1789	<i>Coluber communis</i> Donndorff, 1798*	<i>Hierophis viridiflavus</i> (Lacépède, 1789)
6	<i>Elaphe quatuor-lineata</i> (Lacépède, 1789)	<i>Elaphe quadristriata</i> Donndorff, 1798*; <i>Elaphe quatuorlineata</i> (Bonnaterre, 1790)***	<i>Elaphe quatuorlineata</i> (Bonnaterre, 1790)
7	<i>Elaphe quatuor-lineata sauromates</i> (Pallas, ?1826)	<i>Elaphe quadristriata sauromates</i> (Pallas, 1811)*	<i>Elaphe sauromates</i> (Pallas, 1811) [1814] <i>Elaphe urartica</i> Jablonski et al., 2019 (part.)
8	<i>Elaphe situla</i> (Linné, 1758)	<i>Elaphe leopardina</i> (Bonaparte, 1834)* <i>Elaphe leopardina metaxa</i> (Bonaparte, 1839)* <i>Elaphe situla</i> (Linné, 1758)**	<i>Zamenis situla</i> (Linnaeus, 1758)
9	<i>Eryx tataricus helluo</i> Pallas, ?1826	<i>Eryx helluo helluo</i> Pallas, 1811*	<i>Eryx miliaris</i> (Pallas, 1773)
10	<i>Lacerta taurica taurica</i> Pallas, ?1826	<i>Lacerta taurica taurica</i> Pallas, 1811*	<i>Podarcis tauricus tauricus</i> (Pallas, 1814)
11	<i>Malpolon</i> Fitzinger, 1826*	<i>Malpolon</i> Fitzinger, 1826* ^b	<i>Malpolon</i> Fitzinger, 1826
12	<i>Natrix viperina</i> (Latreille, 1802)	<i>Natrix maura</i> (Linné, 1758)* <i>Natrix maura chersseoides</i> (Wagler, 1824)*	<i>Natrix maura</i> (Linnaeus, 1758)
13	<i>Ophisaurus apodus</i> (Pallas, 1775)	<i>Ophisaurus apus</i> (Pallas, 1775)*	<i>Pseudopus apodus</i> (Pallas, 1775)
14	<i>Rana terrestris terrestris</i> Andrzejowski, 1832	<i>Rana arvalis</i> Nilsson, 1842***	<i>Rana arvalis</i> Nilsson, 1842
15	<i>Tarbophis Fleischmann</i> , 1831 (= <i>Trigonophis</i> Eichwald, 1831)	<i>Tarbophis Fleischmann</i> , 1831 (= <i>Trigonophis</i> Eichwald, 1831)*	<i>Telescopus</i> Wagler, 1830

Note: * – «Isis» (Bd. 19, 1826, S. 892)^a; ^b – «Neue Classification d. Reptilien, 1826, S. 29, 31, 59.»

Table 2. Comparison of turtle classifications of Recent turtles of Siebenrock (1909) and Lindholm (1929c).

Siebenrock 1909		Lindholm 1929c	
Superfamily family subfamily	Genus	Superfamily family subfamily	Genus subgenus (section)
Cryptodira		Testudinoidea	
Chelydridae	<i>Chelydra</i> Schweigger, 1812	Chelydridae	<i>Chelydra</i> Schweigger, 1812
	<i>Devisia</i> D.Ogilby, 1905		<i>Devisia</i> D.Ogilby, 1905
	<i>Macrolemmys</i> Gray, 1855		<i>Macrolemmys</i> Gray, 1855
Cinosternidae		Kinosternidae	
Staurotypinae	<i>Claudius</i> Cope, 1865	Staurotypinae	<i>Claudius</i> Cope, 1865
	<i>Staurotypus</i> Wagler, 1830		<i>Staurotypus</i> Wagler, 1830
Cinosterninae	<i>Cinosternum</i> Spix, 1824	Kinosterninae	<i>Kinosternon</i> Spix, 1824
			<i>Sternothaerus</i> Bell, 1825
			<i>Kinosternon</i> s. str.
Dermatemydidae	<i>Dermatemys</i> Gray, 1847	Dermatemydidae	<i>Dermatemys</i> Gray, 1847
Platysternidae	<i>Platysternon</i> Gray, 1831	Platysternidae	<i>Platysternon</i> Gray, 1831
Testudinidae		Testudinidae	
Emydinae	<i>Kachuga</i> Gray, 1855	Emydinae	<i>Kachuga</i> Gray, 1855
			<i>Kachuga</i> s. str.
			<i>Pangshura</i> Gray, 1855
			<i>Callagur</i> Gray, 1870
			<i>Batagur</i> Gray, 1855
			<i>Hardella</i> Gray, 1870
			<i>Morenia</i> Gray, 1870
			<i>Orlitia</i> Gray, 1873
			<i>Chrysemys</i> Gray, 1844
			<i>Chrysemys</i> s. str.
			<i>Pseudemys</i> Gray, 1855
			<i>Ocadia</i> Gray, 1870
			<i>Malaclemys</i> Gray, 1844
			<i>Malaclemys</i> s. str.
			<i>Graptemys</i> Agassiz, 1857
			<i>Geoclemys</i> Gray, 1855
			<i>Siebenrockiella</i> Lindholm, 1929
<i>Clemmys</i> Ritgen, 1828			
<i>Mauremys</i> Gray, 1869			
<i>Clemmys</i> s. str.			
<i>Deirochelys</i> Agassiz, 1857			

Table 2. Continued.

Siebenrock 1909		Lindholm 1929c	
Superfamily family subfamily	Genus	Superfamily family subfamily	Genus subgenus (section)
Emydinae	<i>Emys</i> Duméril, 1806	Emydinae	<i>Emys</i> Duméril, 1806
			<i>Emys</i> s. str.
			<i>Neoemys</i> Lindholm, 1929
	<i>Terrapene</i> Merrem, 1820		<i>Terrapene</i> Merrem, 1820
			(<i>Emyoides</i> Gray, 1844)
			(<i>Terrapene</i> s. str.)
	<i>Geoemyda</i> Gray, 1834		<i>Geoemyda</i> Gray, 1834
	<i>Geoemyda</i> s. str.		
	<i>Rhinoclemmys</i> Fitzinger, 1835		
<i>Cyclemys</i> Bell, 1834	<i>Cyclemys</i> Bell, 1834		
	<i>Cyclemys</i> s. str.		
	<i>Cuora</i> Gray, 1855		
	<i>Cistoclemmys</i> Gray, 1863		
<i>Notochelys</i> Gray, 1863	<i>Notochelys</i> Gray, 1863		
<i>Pyxidea</i> Gray, 1863	<i>Pyxidea</i> Gray, 1863		
<i>Heosemys</i> Stejneger, 1902	<i>Heosemys</i> Stejneger, 1902		
Testudininae	<i>Cinixys</i> Bell, 1827	Testudininae	<i>Kinixys</i> Bell, 1827
	<i>Acinixys</i> Siebenrock, 1902		<i>Acinixys</i> Siebenrock, 1902
	<i>Pyxis</i> Bell, 1827		<i>Pyxis</i> Bell, 1827
	<i>Homopus</i> Duméril et Bibron, 1835		<i>Homopus</i> Duméril et Bibron, 1835
	<i>Testudo</i> Linnaeus, 1758		<i>Testudo</i> Linnaeus, 1758
			<i>Gopherus</i> Rafinesque, 1832
			<i>Chelonoidis</i> Fitzinger, 1835
			<i>Pampatestudo</i> Lindholm, 1929
			<i>Manouria</i> Gray, 1852
			<i>Indotestudo</i> Lindholm, 1929
			<i>Geochelone</i> Fitzinger, 1835
	<i>Psammobates</i> Fitzinger, 1835		
	<i>Asterochelys</i> Gray, 1873		
	<i>Centrochelys</i> Gray, 1872		
	<i>Malacochersus</i> Lindholm, 1929		
	<i>Goniochersus</i> Lindholm, 1929		
	<i>Testudo</i> s. str.		
	<i>Cylindraspis</i> Fitzinger, 1835		
	<i>Megalochelys</i> Fitzinger, 1843		
	<i>Elephantopus</i> Gray, 1873		

Table 2. Continued.

Siebenrock 1909		Lindholm 1929c	
Superfamily family subfamily	Genus	Superfamily family subfamily	Genus subgenus (section)
Chelonioidea		Chelonioidea	
Cheloniidae	<i>Chelonia</i> Latreille, 1802	Cheloniidae	<i>Chelonia</i> Latreille, 1802
			<i>Chelonia</i> s. str.
			<i>Eretmochelys</i> Fitzinger, 1843
	<i>Caretta</i> Rafinesque, 1814		<i>Caretta</i> Rafinesque, 1814
Dermochelyidae	<i>Dermochelys</i> Blainville, 1816	Dermochelyidae	<i>Dermochelys</i> Blainville, 1816
Pleurodira		Pelomedusoidea	
Pelomedusidae	<i>Sternothaerus</i> Bell, 1825	Pelomedusidae	<i>Sternothaerus</i> Bell, 1825
	<i>Pelomedusa</i> Wagler, 1830		<i>Pelomedusa</i> Wagler, 1830
	<i>Podocnemis</i> Wagler, 1830		<i>Podocnemis</i> Wagler, 1830
			<i>Podocnemis</i> s. str.
			<i>Erymnochelys</i> Baur, 1888
			<i>Peltocephalus</i> Duméril et Bibron, 1835
Chelyidae	<i>Chelys</i> Duméril, 1806	Chelidae	<i>Chelus</i> Duméril, 1906
	<i>Hydromedusa</i> Wagler, 1830		<i>Hydromedusa</i> Wagler, 1830
	<i>Chelodina</i> Fitzinger, 1826		<i>Chelodina</i> Fitzinger, 1826
	<i>Rhinemys</i> Wagler, 1830		<i>Phrynops</i> Wagler, 1830
	<i>Mesoclemmys</i> Gray, 1873		<i>Mesoclemmys</i> Gray, 1873
	<i>Hydraspis</i> Bell, 1828		<i>Batrachemys</i> Stejneger, 1909
	<i>Platemys</i> Wagler, 1830		<i>Platemys</i> Wagler, 1830
	<i>Pseudoemydura</i> Siebenrock, 1901		<i>Pseudoemydura</i> Siebenrock, 1901
	<i>Emydura</i> Bonaparte, 1836		<i>Emydura</i> Bonaparte, 1836
	<i>Elseya</i> Gray, 1867		<i>Elseya</i> Gray, 1867
Trionychoidea		Trionychoidea	
Carettochelyidae	<i>Carettochelys</i> Ramsay, 1886	Carettochelyidae	<i>Carettochelys</i> Ramsay, 1886
Trionychidae		Trionychidae	
	<i>Cycloderma</i> Peters, 1854	Trionychinae	<i>Cycloderma</i> Peters, 1854
	<i>Cyclanorbis</i> Gray, 1852		<i>Cyclanorbis</i> Gray, 1852
	<i>Emyda</i> Gray, 1831		<i>Trionyx</i> Geoffroy, 1809
	<i>Trionyx</i> Geoffroy, 1809	Amydinae	<i>Amyda</i> Geoffroy, 1809
			<i>Amyda</i> s. str.
			<i>Platypeltis</i> Fitzinger, 1835
	<i>Dogania</i> Gray, 1844		<i>Dogania</i> Gray, 1844
	<i>Pelochelys</i> Gray, 1864		<i>Pelochelys</i> Gray, 1864
	<i>Chitra</i> Gray, 1844		<i>Chitra</i> Gray, 1844

Table 3. Turtle generic taxa for which type species are subsequently designated by Lindholm (1929c).¹

No.	Genus or subgenus	Subsequently designated type species	Current name (Rhodin et al. 2017)
1	<i>Callichelys</i> Gray, 1863	" <i>Emys ornata</i> Gray" ²	<i>Trachemys ornata</i> (Gray in Griffith et Pidgeon, 1830)
2	<i>Chelomedusa</i> Gray, 1873	" <i>Hydromedusa depressa</i> Gray (= <i>H. maxmilianii</i> Mikán)"	<i>Hydromedusa maxmilianii</i> (Mikán, 1820)
3	<i>Chersine</i> Merrem, 1820	" <i>T. graeca</i> »L.« auct. = <i>T. hermanni</i> Gmelin"	<i>Testudo (Chersine) hermanni hermanni</i> Gmelin, 1789
4	<i>Chersinella</i> Gray, 1870	" <i>T. graeca</i> L." ³	<i>Psammodates geometricus</i> (Linnaeus, 1758)
5	<i>Chersobius</i> Fitzinger, 1835	" <i>Testudo signata</i> Wahlb."	<i>Chersobius signatus</i> (Gmelin, 1789)
6	<i>Cuchoa</i> Gray, 1870	" <i>Emys tentoria</i> Gray (= <i>E. tecta</i> Gray)"	<i>Pangshura tentoria tentoria</i> (Gray, 1834)
7	<i>Dongoka</i> Gray, 1869	" <i>Kachuga hardwickii</i> Gray 1869 (= <i>Emys lineata</i> Gray 1831)"	<i>Batagur dhongoka</i> (Gray, 1832)
8	<i>Elseya</i> Gray, 1867	" <i>Chelymys dentata</i> Gray"	<i>Elseya (Elseya) dentata</i> (Gray, 1863)
9	<i>Euchelymys</i> Gray, 1871	" <i>E. sulcifera</i> Gray = <i>Hydraspis macquarrii</i> Gray"	<i>Emydura macquarrii macquarrii</i> (Gray, 1830)
10	<i>Geoemyda (Rhinoclemmys)</i> Fitzinger, 1835	" <i>Emys dorsata</i> Schweigger 1812 (= <i>Testudo punctularia</i> Daudin 1803)"	<i>Rhinoclemmys punctularia</i> (Daudin, 1801)
11	<i>Goniocelys</i> Agassiz, 1857	" <i>G. triquetra</i> Agass. = <i>Aromocelys carinata</i> Gray"	<i>Sternotherus carinatus</i> (Gray, 1856)
12	<i>Clemmys (Mauremys)</i> Gray, 1869	" <i>Emys fuliginosa</i> Gray = <i>E. leprosa</i> Schweigger var."	<i>Mauremys leprosa leprosa</i> (Schoepff in Schweigger, 1812)
13	<i>Morenia</i> Gray, 1870	" <i>Emys berdmorei</i> Blyth 1859 = <i>E. ocellata</i> Dum. et Bibr. 1835"	<i>Morenia ocellata</i> (Duméril et Bibron, 1835)
14	<i>Ozotheca</i> Agassiz, 1857	" <i>Testudo odorata</i> Latreille"	<i>Sternotherus odoratus</i> (Latreille in Sonnini et Latreille, 1801)
15	<i>Kachuga (Pangshura)</i> Gray, 1855	" <i>Emys tecta</i> Gray 1830 (= <i>Testudo pangshura</i> Hamilton mss. fide Gray 1831)"	<i>Pangshura tecta</i> (Gray, 1830)
16	<i>Pelastes</i> Gray, 1869	" <i>T. graeca</i> L."	<i>Testudo (Testudo) graeca ibera</i> Pallas, 1814
17	<i>Ptychemys</i> Agassiz, 1857	" <i>P. concinna</i> Leconte" ⁴	<i>Pseudemys concinna concinna</i> (Le Conte, 1830)
18	<i>Sternotherus</i> Gray, 1831	" <i>St. subniger</i> Gray (= <i>T. nigricans</i> Donndorff)"	<i>Pelusios subniger subniger</i> (Bonnaterre, 1789)
19	<i>Tanoa</i> Gray, 1863	" <i>Sternotherus sinuatus</i> Smith"	<i>Pelusios sinuatus</i> (Smith, 1838)
20	<i>Testudo</i> Linnaeus, 1758	" <i>T. graeca</i> L. (= <i>T. ibera</i> Pallas 1811) non <i>T. graeca</i> auct."	<i>Testudo graeca</i> Linnaeus, 1758
21	<i>Thyrosternum</i> Agassiz, 1857	" <i>Testudo pensilvanica</i> Gmelin"	<i>Kinosternon subrubrum subrubrum</i> (Bonnaterre, 1789)
22	<i>Trachemys</i> Agassiz, 1857	" <i>Emys troostii</i> Holbrook"	<i>Trachemys scripta troostii</i> (Holbrook, 1836)

¹In addition to this list, Fritz and Havas (2007) mentioned *Testudo spengleri* Gmelin, 1789 as a type species of *Geoemyda* Gray, 1834 subsequently designated by Lindholm (1929c), whereas Rhodin et al. (2017) noted that this is a type species by original designation.²According to Rhodin et al. (2017) and contra to Fritz and Havas (2006), *Callichelys ornata* [= *Emys ornata* Gray in Griffith et Pidgeon, 1830] is a type species of *Callichelys* Gray, 1863 by original designation.³Subsequent type fixation of *Testudo graeca* Linnaeus, 1758 by Lindholm (1929c) is an error as this species was not included in *Chersinella* by Gray (1870); Art. 69.2.2 of ICZN 1999 (see Fritz and Havas 2007; Rhodin et al. 2017).⁴*Ptychemys concinna* (LeConte, 1830) was designated as a type species of *Ptychemys* Agassiz, 1857 by Brown (1908) before Lindholm (1929c) (see Fritz and Havas 2007; Rhodin et al. 2017).

Table 4. New taxa^T, replacement names^N, combinations^C, spellings^S and available names^A of turtle taxa proposed by Lindholm (1906*, 1929c**, d***, 1931****) as well as their current names.

No.	Name in Lindholm	Current name (Rhodin et al., 2017)
1	<i>Batagur batagur</i> (Gray, 1831)** ^C	<i>Batagur baska</i> (Gray, 1831)
2	<i>Cathaiemys</i> ^T <i>mutica</i> (Cantor, 1842)****	<i>Mauremys mutica mutica</i> (Cantor, 1842)
3	Chelidae ^S Gray, 1825**	Chelidae Gray, 1825
4	<i>Chrysemys palustris elegans</i> (Wied, 1839)** ^C	<i>Trachemys scripta elegans</i> (Wied, 1839)
5	<i>Chrysemys palustris scripta</i> (Schoepff, 1792)** ^C	<i>Trachemys scripta scripta</i> (Schoepff, 1792)
6	<i>Chrysemys umbra</i> (Bocourt, 1876)** ^C	<i>Trachemys grayi grayi</i> (Bocourt, 1868)
7	<i>Clemmys bealei</i> ^S (Gray, 1831)**	<i>Sacalia bealei</i> (Gray, 1831)
8	<i>Homopus bergeri</i> ^T Lindholm, 1906*	<i>Psammobates tentorius verroxii</i> (Smith, 1839)
9	<i>Kachuga tecta</i> ^S (Gray, 1831)**	<i>Pangshura tecta</i> (Gray, 1831)
10	Kinosternidae ^S Agassiz, 1857**	Kinosternidae Agassiz, 1857
11	Kinosterninae ^S Agassiz, 1857**	Kinosterninae Agassiz, 1857
12	<i>Malaclemys terrapin littoralis</i> (Hay, 1905)** ^C	<i>Malaclemys terrapin littoralis</i> (Hay, 1905)
13	<i>Malaclemys terrapin macrospilota</i> (Hay, 1905)** ^C	<i>Malaclemys terrapin macrospilota</i> (Hay, 1905)
14	<i>Malaclemys terrapin pileata</i> (Wied, 1865)** ^C	<i>Malaclemys terrapin pileata</i> (Wied, 1865)
15	<i>Malaclemys terrapin terrapin</i> (Schoepff, 1793)** ^C	<i>Malaclemys terrapin terrapin</i> (Schoepff, 1793)
16	<i>Malayemys</i> ^N <i>subtrijuga</i> (Schlegel et Müller, 1845)****	<i>Malayemys subtrijuga</i> (Schlegel et Müller, 1845)
17	<i>Emys</i> (<i>Neoemys</i> ^N) <i>blandingii</i> (Holbrook, 1838)**	<i>Emys blandingii</i> (Holbrook, 1838) or <i>Emydoidea blandingii</i> (Holbrook, 1838)
18	<i>Pelomedusa subrufa</i> (Bonnaterre, 1789)** ^A	<i>Pelomedusa subrufa</i> (Bonnaterre, 1789)
19	<i>Pelusios subniger</i> (Bonnaterre, 1789)** ^A	<i>Pelusios subniger</i> (Bonnaterre, 1789)
20	<i>Pseudocadia</i> ^T <i>anyangensis</i> (Ping, 1930)****	<i>Mauremys sinensis</i> (Gray, 1834)
21	<i>Siebenrockiella</i> ^N <i>crassicollis</i> (Gray, 1831)**	<i>Siebenrockiella crassicollis</i> (Gray, 1831)
22	<i>Terrapene kinosternoides</i> ^S (Gray, 1831)**	<i>Terrapene carolina carolina</i> (Linnaeus, 1758)
23	<i>Testudo</i> (<i>Goniochersus</i> ^N) <i>angulata</i> Schweigger, 1812**	<i>Chersina angulata</i> (Schweigger, 1812)
24	<i>Testudo</i> (<i>Indotestudo</i> ^T) <i>elongata</i> Blyth, 1853**	<i>Indotestudo elongata</i> (Blyth, 1853)
25	<i>Testudo</i> (<i>Malacochersus</i> ^T) <i>tornieri</i> Siebenrock, 1903**	<i>Malacochersus tornieri</i> (Siebenrock, 1903)
26	<i>Testudo oscarboettgeri</i> ^N Lindholm, 1929**	<i>Psammobates tentorius verroxii</i> (Smith, 1839)
27	<i>Testudo</i> (<i>Pampatestudo</i> ^N) <i>chilensis</i> (Gray, 1870)**	<i>Chelonoidis chilensis</i> (Gray, 1870)
28	<i>Testudo subrubra</i> Bonnaterre, 1789** ^A	<i>Kinosternon subrubrum subrubrum</i> (Bonnaterre, 1789)
29	<i>Testudo terrapen</i> Bonnaterre, 1789** ^A	<i>Trachemys terrapen</i> (Bonnaterre, 1789)
30	<i>Trionyx punctatus</i> (Bonnaterre, 1789)** ^A	<i>Lissemys punctata</i> (Bonnaterre, 1789)

and Müller (1928; see Table 1). One paper (Lindholm 1929d) was devoted to scientific (available) names of some reptiles and amphibians. Finally, the major paper of this year (Lindholm 1929c) presented a revised, in comparison with Siebenrock (1909), list of genera of Recent turtles with notes on nomenclature of some species. In this paper, he modified Siebenrock's (1909) classification by recognition of two additional sub-

families and 41 subgenera, provided complete lists of synonyms for genera and subgenera and subsequently designated generotypes (type species) for 22 generic taxa of Recent turtles. Among new taxa introduced in this paper were two new subgenera (*Testudo* (*Indotestudo*) and *Testudo* (*Malacochersus*)), new replacement names for one genus (*Siebenrockiella*), three subgenera (*Emys* (*Neoemys*), *Testudo* (*Goniochersus*),

and *Testudo* (*Pampatestudo*) and one species (*Testudo oscarboettgeri*), as well as new combinations and spellings for some turtle taxa (see Tables 2 and 3).

The last herpetological publication of Lindholm (1931) was also devoted to turtles. In this paper a systematic position of the turtle †*Testudo anyangensis* Ping, 1930 described from Annyang Hsien archaeological ruins (1500 years BCE), Henan, South China (Ping 1930) was discussed, and as a result a new genus (†*Pseudocadia*) was established for this species. In addition, a new genus (*Cathaiemys*) was established for *Emys mutica* Cantor, 1842 and a new replacement name (*Malayemys*) was proposed for *Emys subtrijuga* Schlegel et Müller, 1845 (see Table 4).

To summarize, the herpetological biography of Lindholm can be divided into three periods: a naturalistic period (1893–1898), when he made his first herpetological collections and observations; a German period (1900–1906), when he worked with the collections of amphibians and reptiles in the Museum Wiesbaden and became an expert on the systematics of these groups; and finally, a Russian period (1924–1931), when he published several important contributions on the nomenclature of amphibians and reptiles.

In total, Lindholm introduced 21 reptilian taxa (turtles – 11; lizards – 4; snakes – 6), of which eight are currently valid (turtles – 4; lizards – 1; snakes – 3) (see “List of reptilian taxa introduced by W.A. Lindholm”). In addition to introduction of the new taxa of reptiles, he contributed to the development of the classification of turtles, made subsequent designations of the generotypes (type species) for numerous turtle taxa, proposed available names, new combinations and improved spellings for many taxa of amphibians and reptiles (for details see “Annotated bibliography of herpetological publications of W.A. Lindholm” below).

Four reptilian taxa bear the name of Lindholm (see “List of reptilian taxa named in honour of W.A. Lindholm”). One of them is a lizard *Lacerta saxicola lindholmi* Szczerbak, 1962, primarily named by Lantz and Cyrén (1936). L.A. Lantz was a friend of Lindholm (1929d: 77). Another one is a fossil turtle *Lindholmemys elegans* Riabinin, 1935 from the Upper Cretaceous deposits of Kizylkum Desert (Riabinin 1935). A.N. Riabinin (1874–1942), a Russian-Soviet vertebrate paleontologist, named this turtle “in honour of a well known expert on turtles, senior zoologist of the Zoological Museum W.A. Lindholm”,

whom he was grateful for his kind advice during its study (Riabinin 1935: 71). Two other taxa are turtle family Lindholmemydidae and subfamily Lindholmemydinae based on the genus *Lindholmemys* (see Danilov et al. 2017).

ANNOTATED BIBLIOGRAPHY OF THE HERPETOLOGICAL PUBLICATIONS OF W.A. LINDHOLM

Lindholm W.A. 1901. Bemerkungen und Beschreibung einer neuen Eidechsenart. In: E.D. Lampe. Catalog der Reptilien-Sammlung (Schildkröten, Crocodile, Eidechsen und Chamaeleons) des Naturhistorischen Museums zu Wiesbaden (*Jahrbücher des Nassauischen Vereins für Naturkunde*, **54**: 177–222). Verlag von J.F. Bergmann, Wiesbaden: 185–187.

This paper presents the first part of the catalogue of reptiles and amphibians (turtles, crocodiles, lizards and chamaeleons) from the collection of Museum Wiesbaden by E. Lampe with remarks on some turtle and lizard specimens by W.A. Lindholm. In addition, W.A. Lindholm described there a new lizard species of the family Scincidae, *Lygosoma* (*Liolepisma*) *pagenstecheri* Lindholm, 1901 based on a single specimen from South Australia. The species is named after a lepidopterologist and inspector of Museum Wiesbaden Dr. Pagen Stecher. Illustrations of this paper include this new lizard species and a juvenile of the turtle *Cinosternum carinatum* (Gray, 1956), which demonstrates differences from the diagnosis of this species given by Boulenger (1889).

Remarks. The current name of *Lygosoma* (*Liolepisma*) *pagenstecheri* is *Pseudemoia pagenstecheri* (Lindholm, 1901) (see Uetz et al. 2019). The current name of *Cinosternum carinatum* is *Sternotherus carinatus* (Gray, 1856) (see Rhodin et al. 2017).

Lampe E. and Lindholm W.A. 1902. Catalog der Reptilien- und Amphibian-Sammlung (Schlangen; Frösch-, Schwanz- und Schleichenlurche) des Naturhistorischen Museums zu Wiesbaden, mit Bemerkungen. *Jahrbuch des Nassauischen Vereins für Naturkunde*, **55**: 1–66.

This paper presents the second part of the catalogue of reptiles and amphibians (snakes, frogs, salamanders and caecilians) from the collection of Museum Wiesbaden by E. Lampe with remarks of W.A. Lindholm, including descriptions of two new taxa of snakes (Colubridae: Colubrinae): a new sub-

species *Helicops carinicauda* var. *triserialis* and a new subgenus and species *Prosymna* (*Pseudoprosymna*) *bergeri*. The former taxon is based on a single specimen from Brazil, whereas the latter one is based on two specimens collected by a missionary Mr. C. Berger in the German South-West Africa (Gibeon, Namibia). There are no illustrations in this paper.

Remarks. The current name of *Helicops carinicauda* var. *triserialis* is *Helicops carinicaudus triserialis*; *Prosymna* (*Pseudoprosymna*) *bergeri* is considered a junior synonym of *Prosymna frontalis* (Peters, 1867) (see Uetz et al. 2019).

Lindholm W.A. 1902a. Das Tierleben der Kargalinskaja Steppe (Orenburg). In: W. Kobelt. Die Verbreitung der Tierwelt. Tauchnitz, Leipzig: 188–195. (seen in Russian edition: Kobelt W. 1903. Geographical Distribution of Animals in Cold and Moderate Zones of the North Hemisphere. St. Petersburg, Published by A.F. Devrien, 644 p.; text by Lindholm W.A.: 215–217. [In Russian]).

This is a popular-science essay about animals inhabiting the Kargalinskaya Steppe (north-west of Orenburg, Russia). It contains observations on the natural history of the following reptiles and amphibians: a turtle *Emys lutaria*, snakes *Coluber austriaca*, *Tropidonotus natrix*, *T. tessellatus*, and *Vipera renardi*, lizards *Lacerta agilis* var. *exigua*, *L. vivipara*, and frogs *Bufo variabilis* and *Rana esculenta* var. *ridibunda*.

Remarks. The current names of the taxa listed above are (in the same order; Uetz et al. 2019): *Emys orbicularis* (Linnaeus, 1758), *Coronella austriaca* Laurenti, 1768, *Natrix natrix* (Linnaeus, 1758), *N. tessellata* (Laurenti, 1768), *Vipera renardi* (Christoph, 1861), *Lacerta agilis exigua* Eichwald, 1831, *Zootoca vivipara* (Lichtenstein, 1823), *Bufotes variabilis* (Pallas, 1769) or *B. viridis* (Laurenti, 1768), and *Pelophylax ridibundus* (Pallas, 1771).

Lindholm W.A. 1902b. Beiträge zur Biologie einiger Reptilien des Europäischen Russlands. Der Zoologische Garten (Zoologischer Beobachter), **43**(2): 20–26, 41–56.

This paper contains observations on natural history of some reptiles from European Russia, the areas of the Kargalinskaya Steppe (north-west from Orenburg; observations from February 1893 till May 1894) and vicinities of Novy Oskol (observations of summer 1897–1898). These reptiles are: 1) *Lacerta agilis* var. *exigua* Eichw.; 2) *Lacerta vivipara* Jacqu.; 3) *Anguis fragilis* L.; 4) *Tropidonotus natrix* (L.);

5) *T. tessellatus* (Laur.), 6) *Coronella austriaca* Laur.; 7) *Vipera berus* L.; 8) *V. renardi* Christoph.; and 9) *Emys orbicularis* L.

Remarks. For the current names of the species 2, 4 and 5 see Remarks section to Lindholm W.A. 1902a. Other names are currently in use (Uetz et al. 2019). One specimen of *Emys orbicularis* from these collections was mentioned in the catalogue of reptiles and amphibians of the Museum Wiesbaden by Lampe (1911: 144).

Lindholm W.A. 1902c. Biologische Beobachtungen an einigen Batrachiern des Europäischen Russlands. *Der Zoologische Garten (Zoologischer Beobachter)*, **43**(12): 390–403.

This paper contains observations on the natural history of the amphibians from European Russia, the areas of the Kargalinskaya Steppe (north-west from Orenburg) and vicinities of Novy Oskol. These amphibians are: 1) *Rana esculenta* L. var. *ridibunda* Pall.; 2) *Rana fusca* Rösel.; 3) *R. arvalis* Nilss.; 4) *Bufo vulgaris* Laur.; 5) *B. viridis* L.; 6) *Pelobates fuscus* (Laur.); 7) *Bombinator igneus* (Laur.); and 8) *Molge vulgaris* (L.).

Remarks. The current names of these species are (Frost 2019): 1) *Pelophylax ridibundus* (Pallas, 1771), 2) *Rana temporaria* Linnaeus, 1758; 3) *R. arvalis* Nilsson, 1842; 4) *Bufo bufo* (Linnaeus, 1758); 5) *Bufotes variabilis* (Pallas, 1769) or *B. viridis* (Laurenti, 1768); 6) *Pelobates vespertinus* (Pallas, 1771); 7) *Bombina bombina* (Linnaeus, 1761); and 8) *Lissotriton vulgaris* (Linnaeus, 1758).

Lindholm W.A. 1905a. Beschreibung einer neuen Schlangenart (*Dipsadophidium weileri* nov. gen. et. nov. sp.) aus Kamerun. *Jahrbücher des Nassauischen Vereins für Naturkunde*, **58**: 183–187.

This paper contains description of a new genus and species of the colubrid snake *Dipsadophidium weileri* based on a single specimen from Bibundi (Cameroon), which was donated to the Museum Wiesbaden by Mr. Justus Weiler. Its systematic position was shown to be within the subfamily Dipsadomorphinae of Boulenger (1896). There are no illustrations in this paper.

Remarks. The current name of this species is *Dipsadoboa weileri* (Lindholm, 1905) (see Uetz et al. 2019).

Lindholm W.A. 1905b. Über einige Eidechsen und Schlangen aus Deutsch-Neuguinea. *Jahrbücher des Nassauischen Vereins für Naturkunde*, **58**: 227–240.

This paper describes a small collection of lizards and snakes (in total 21 specimens) received by Museum Wiesbaden from a missionary Mr. W. Diehl, who collected it in German New Guinea (now part of Papua New Guinea). The lizards were represented by Varanidae: *Varanus indicus* (Daud.) and *V. prasinus* (Müll.) Schleg. sp.; Pygopodidae: *Alopecosaurus cuneirostris* (new genus and species; f. *typica* and var. *inornata*) and *Lialis burtoni* Gray; whereas snakes included Boidae: *Enygrus carinatus* (Schneid.); and Colubridae: *Stegonotus diehli* (new species), *Dendrophis calligaster* Gthr., *Dipsadomorphus irregularis* (Merr.), and *Acanthophis antarcticus* (Shaw). There are no illustrations in this paper.

Remarks. *Alopecosaurus cuneirostris* and *A. c. var. inornata* are now considered to be synonyms of *Lialis jicari* Boulenger, 1903 (see Uetz et al. 2019). According to Kluge (1974: 141), “when Lindholm described his two forms <...>, he simply overlooked Boulenger’s original description of *jicari* which had appeared only two years earlier (1903)”. Current names of some of the mentioned taxa have been changed (see Uetz et al. 2019): *Lialis burtoni* to *Lialis burtonis*; *Enygrus carinatus* to *Candoia carinata*; *Dendrophis calligaster* to *Dendrelaphis calligaster*; *Dipsadomorphus irregularis* to *Boiga irregularis* (Bechstein, 1802). *Acanthophis antarcticus* is now placed in Elapidae (see Uetz et al. 2019).

Lindholm W.A. 1905c. Nachschrift [to Lindholm, 1905b]. *Jahrbücher des Nassauischen Vereins für Naturkunde*, **58**: 240.

This is a postscript to Lindholm’s (1905b) paper, where a close similarity is reported between *Alopecosaurus cuneirostris* and *Lialis jicari* Boulenger, 1903. The question of the validity of the genus *Alopecosaurus* is postponed for the future.

Lindholm W.A. 1906. Beschreibung einer neuen Schildkrötenart aus Deutsch-Südwestafrika nebst Bemerkungen über die Gattung *Homopus* D. et B. *Jahrbücher des Nassauischen Vereins für Naturkunde*, **59**: 345–351.

This paper describes a new species of the tortoise *Homopus bergeri* based on a single shell from German South-West Africa (Gibeon, Namibia), received by Museum Wiesbaden from a missionary Mr. C. Berger. A key for the species of the genus *Homopus* Duméril et Bibron, 1834 is given. There are no illustrations in this paper.

Remarks. The name *Homopus bergeri* Lindholm, 1906 appears to be a junior synonym of *Testudo ver-*

roxii Smith, 1839 (now *Psammobates tentorius verroxii* (Smith, 1839); see Fritz and Havas, 2006; Rhodin et al., 2017). The name *Homopus bergeri* was also used for a separate taxon by Branch (1989), but for the reason of the synonymy mentioned above it was later described as *Homopus solus* by Branch (2007; now *Chersobius solus* (Branch, 2007); see Rhodin et al., 2017).

Lindholm W.A. 1924. A forgotten description of a North American frog. *Copeia*, **129**: 46–47.

This paper is devoted to a forgotten description of a frog *Rana canagica* Pallas, 1811 (1831) from the Aleutians of Alaska. Two other frogs known from Alaska, *Rana cantabrigensis* Baird, 1854 and *Bufo boreas boreas* Baird et Girard, 1852, partially correspond to a poor description of *R. canagica*. The author notes that in case of synonymy with one of these taxa, the name of Pallas has priority.

Remarks. Myers (1930) placed “*Rana canagica* Pallas, 1831” as a senior synonym of *Bufo boreas* Baird et Girard, 1852 as a new combination *Bufo canagicus canagicus* (Pallas). Stejneger and Barbour (1933) asserted *Rana canagica* a nomen dubium. Finally, Kuzmin (1996) allocated this name to *Bufo boreas* and treated *Rana canagica* Pallas, [1814] as a nomen oblitum. The current names of *Bufo boreas* Baird et Girard, 1852 and *Rana cantabrigensis* Baird, 1854 are *Anaxyrus boreas* (Baird et Girard, 1852) and *Lithobates sylvaticus* (LeConte, 1825) respectively (Frost 2019).

Lindholm W.A. 1929a. Zur Nomenklatur einiger Eidechsen und Schlangen Europas. *Zoologischer Anzeiger*, **81**(1/4): 73–82.

This paper discusses nomenclature of 13 lizard and snake taxa of Europe in response to the list of amphibians and reptiles of Europe by Mertens and Müller (1928). The author gives 15 proper names for these taxa based on the priority rule, corrects spelling and citations of some taxa, as well as years for taxa described by P.S. Pallas (1811) in “*Zoographia Rosso-Asiatica*” (see Table 1).

Remarks. Of the 15 names of amphibians and reptiles of Europe considered valid by Lindholm (1929a) only three are currently in use as species epithets (see Table 1). The year of publication of “*Zoographia Rosso-Asiatica*” (third volume) is now considered as 1814 (Svetovidov 1976).

Lindholm W.A. 1929b. Nachtrag zu Lindholm: Zur Nomenklatur einiger Eidechsen und Schlangen

Europas, Zoolog. Anzeiger, 81. Bd., S. 73. *Zoologischer Anzeiger*, **81**(1/4): 83.

This addition to the Lindholm (1929a) paper reports identity of the type specimen of *Coluber situla* Linné with *Elaphe leopardina* (Bonap.) of Mertens and Müller (1928), the correct name for which is *Elaphe situla* (L.).

Remarks. *Elaphe situla* is considered a valid name in modern checklists (see Uetz et al. 2019).

Lindholm W.A. 1929c. Revidiertes Verzeichnis der Gattungen der rezenten Schildkröten nebst Notizen zur Nomenklatur einiger Arten. *Zoologischer Anzeiger*, **81**(11/12): 275–295.

This paper presents a revised list of genera of Recent turtles in comparison with Siebenrock (1909) and contains notes on the nomenclature of some turtle species. The classification of turtles accepted by Lindholm (1929c) is similar to the classification of Siebenrock (1909) in number of orders (1), superfamilies (4), families (11) and genera (57), but differs by number of subfamilies (6; Trionychinae and Amydinae are recognized within Trionychidae) and introduction of 41 generic subdivisions (subgenera and sections) for 13 genera, as well as by different names or spellings used for some taxa (Testudinoidea instead of Cryptodira; Pelomedusoidea instead of Pleurodira; Kinosternidae instead of Cinosternidae; Kinosterninae instead of Cinosterninae; and Chelidae instead of Chelyidae; see Table 2). All existing synonyms are listed for genera and subgenera. The generotypes (type species) are subsequently designated for 22 valid and synonymous generic taxa (see Table 3). Two new subgenera are established (*Testudo* (*Indotestudo*) Lindholm, 1929 and *Testudo* (*Malacochersus*) Lindholm, 1929) as well as new replacement names are proposed for one genus (*Siebenrockiella* Lindholm, 1929 = *Bellia* Gray, 1869), three subgenera (*Emys* (*Neoemys*) Lindholm, 1929 = *Emydoidea* Gray, 1870; *Testudo* (*Goniochersus*) Lindholm, 1929 = *Chersina* «Merrem» Gray, 1831; and *Testudo* (*Pampatestudo*) Lindholm, 1929 = *Gopher* Gray, 1870) and one species (*Testudo oscarboettgeri* Lindholm, 1929 = *Testudo boettgeri* Siebenrock, 1904). In addition, new combinations and spellings are proposed for some taxa (see Table 4).

Remarks. Modern classification of Recent turtles is much different from those of Lindholm (1929c) in the composition of suborders, superfamilies and families, but most genera and subgenera recognized by him are currently in use (see Rhodin et al. 2017).

For more notes on taxonomic and nomenclatural arrangements of turtles by Lindholm (1929c) see Fritz and Havas (2007), Bour and Ohler (2008), and Rhodin et al. (2017).

Lindholm W.A. 1929d. Die wissenschaftlichen Namen einiger Reptilien und Batrachier. *Zoologischer Anzeiger*, **85**(3/4): 76–80.

This paper is devoted to proper (available) scientific names of some reptiles and amphibians. The priority of some snake and turtle names proposed by Bonnaterre (1789, 1790) is asserted over names used by Lacepède (1789): *Elaphe quatuor-lineata* (Bonnaterre, 1790), *Pelomedusa subrufa* (Bonnaterre, 1789), *Pelusios subniger* (Bonnaterre, 1789), *Trionyx punctatus* (Bonnaterre, 1789), and under question *Testudo subrufa* Bonnaterre, 1789 and *Testudo terrapen* Bonnaterre, 1789. The priority of the frog name *Rana arvalis* Nilsson, 1842 is asserted over *Rana terrestris terrestris* Andrzejowski, 1832 used by Mertens and Müller (1928). The name *Alytes* (orig. *Bufo*) *obstetricans* (Laurenti, 1768) is considered a nomen nudum, whereas the name *Alytes* (orig. *Rana*) *campanisonus* (Laurenti, 1768) is considered a valid name for this species with two subspecies: *A. c. campanisonus* (Laurenti, 1768) and *A. c. boscai* Lataste, 1879.

Remarks. For summary of the data presented in this paper see Table 1 (for snakes and frogs) and Table 4 (for turtles). All names proposed by Lindholm (1929d), except *Alytes c. campanisonus* and *A. c. boscai*, are considered valid in modern checklists (Rhodin et al., 2017; Frost 2019; Uetz et al. 2019).

Lindholm, W.A. 1931. Über eine angebliche *Testudo*-Art aus Südchina. *Zoologischer Anzeiger*, **97**: 27–30.

This paper discusses the systematic position of †*Testudo anyangensis* Ping, 1930, a species described based on a single shell from Annyang Hsien archaeological ruins (1500 years BCE), Henan, South China (Ping 1930). The author concludes that this species belongs to the family Emydidae and differs from all its living representatives. For this reason, a new genus †*Pseudocadia* Lindholm, 1931 is established for this species. In addition, new genera of Emydidae are introduced: *Cathaiemys* Lindholm, 1931 for *Emys mutica* Cantor, 1842 and *Malayemys* Lindholm, 1931 for *Emys subtrijuga* Schlegel et Muller, 1845. Previously *Emys subtrijuga* was considered a type species of *Damonia* Gray, 1869, but this name appeared to be preoccupied by Diptera (junior homonym of *Damonia* Robineau-Desvoidy, 1847).

Remarks. Khosatzky (1945) published a short note about †*Pseudocadia anyangensis* and mentioned additional material of this species (also see Danilov et al., 2013). McDowell (1964) synonymized this species with *Mauremys mutica* (Cantor, 1842), whereas Zhao and Adler (1993), with *Ocadia sinensis* (= *Mauremys sinensis*). In modern checklists (Fritz and Havas, 2007; Rhodin et al., 2015, 2017), the names †*Pseudocadia* Lindholm, 1931 and *Cathaiemys* Lindholm, 1931 are considered junior synonyms of *Mauremys* Gray, 1869 (see Table 4). The type species of *Damonina* is *Geoclemmys macrocephala* Gray, 1859 by subsequent designation by Stejneger (1907). The same species is the type of *Malayemys* in accordance with ICZN article 67.8. All the mentioned taxa are now members of the family Geoemydidae (see Fritz and Havas, 2007; Rhodin et al., 2017).

LIST OF REPTILIAN TAXA INTRODUCED BY W.A. LINDHOLM

Alopecosaurus Lindholm, 1905b: 230. Type species – *Alopecosaurus cuneirostris* Lindholm, 1905. = *Lialis* Gray, 1835. [Sauria: Pygopodidae].

bergeri (*Homopus*) Lindholm, 1906: 348. = *Psammobates tentorius verroxii* (Smith 1839). [Testudines: Testudinidae].

bergeri (*Prosymna* (*Pseudoprosymna*)) Lindholm in Lampe et Lindholm, 1902: 57. = *Prosymna frontalis* (Peters, 1867). [Serpentes: Prosymnidae].

Cathaiemys Lindholm, 1931: 29. Type species – *Emys mutica* Cantor, 1842. = *Mauremys* Gray, 1869. [Testudines: Geoemydidae].

cuneirostris (*Alopecosaurus*) Lindholm, 1905b: 231. = *Lialis jicari* Boulenger, 1903. [Sauria: Pygopodidae].

diehli (*Stegonotus*) Lindholm, 1905b. = *Stegonotus diehli* Lindholm, 1905; = *Stegonotus melanolabiatatus* Ruane et al., 2017 (part). [Serpentes: Colubridae].

Dipsadophidium Lindholm, 1905a: 185. Type species – *Dipsadophidium weileri* Lindholm, 1905. = *Dipsadoboa* Günther, 1858. [Serpentes: Colubridae].

Goniochersus (as a subgenus of the genus *Testudo*) Lindholm, 1929c: 285. A replacement name for “*Chersina* «Merrem» Gray, 1831” (pseudogenotype). = *Chersina* Gray, 1830. [Testudines: Testudinidae].

Indotestudo (as a subgenus of the genus *Testudo*) Lindholm, 1929: 285. Type species – *Testudo elongata* Blyth, 1854. = *Indotestudo* Lindholm, 1929. [Testudines: Testudinidae].

inornata (*Alopecosaurus cuneirostris* var.) Lindholm, 1905b: 233. = *Lialis jicari* Boulenger, 1903. [Sauria: Pygopodidae].

Malacochersus (as a subgenus of the genus *Testudo*) Lindholm, 1929c: 285. Type species – *Testudo tornieri* Siebenrock, 1903. = *Malacochersus* Lindholm, 1929. [Testudines: Testudinidae].

Malayemys Lindholm, 1931: 30. A replacement name for *Damonina* Gray, 1869 (Diptera). = *Malayemys* Lindholm, 1931. [Testudines: Geoemydidae].

Neoemys (as a subgenus of the genus *Emys*) Lindholm, 1929c: 282. A replacement name for *Emydoidea* Gray, 1870 (rejected as a genus name due to the superfamily ending). = *Emydoidea* Gray, 1870. [Testudines: Emydidae].

oscarboettgeri (*Testudo*) Lindholm, 1929c: 295. As a replacement name for *Testudo boettgeri* Siebenrock, 1904. = *Psammobates tentorius verroxii* (Smith 1839). [Testudines: Testudinidae].

pagenstecheri (*Lygosoma* (*Liolepisma*)) Lindholm, 1901: 38. = *Pseudemoia pagenstecheri* (Lindholm, 1901). [Sauria: Scincidae].

Pampatestudo (as a subgenus of the genus *Testudo*) Lindholm, 1929c: 285. As a replacement name for *Gopher* Gray, 1870. = *Chelonoidis* Fitzinger, 1835. [Testudines: Testudinidae].

†*Pseudocadia* Lindholm, 1931: 30. Type species – †*Testudo anyangensis* Ping, 1930. = *Mauremys* Gray, 1869. [Testudines: Geoemydidae].

Pseudoprosymna (as a subgenus of the genus *Prosymna*) Lindholm in Lampe et Lindholm, 1902: 58. Type species – *Prosymna* (*Pseudoprosymna*) *bergeri* Lindholm in Lampe et Lindholm, 1902. = *Prosymna* Gray, 1849. [Serpentes: Prosymnidae].

Siebenrockiella Lindholm, 1929c: 280. A replacement name for *Bellia* Gray, 1869, non Milne Edwards, 1848 (Crustacea). = *Siebenrockiella* Lindholm, 1929. [Testudines: Geoemydidae].

triserialis (*Helicops carinicauda* var.) Lindholm in Lampe et Lindholm, 1902: 16. = *Helicops carinicaudus triserialis* Lindholm in Lampe et Lindholm, 1902. [Serpentes: Colubridae].

weileri (*Dipsadophidium*) Lindholm, 1905a: 186. = *Dipsadoboa weileri* (Lindholm, 1905). [Serpentes: Colubridae].

LIST OF REPTILIAN TAXA NAMED IN HONOUR OF W.A. LINDHOLM

Lacerta saxicola lindholmi Szczerbak, 1962: 1376 [not *Lacerta saxicola lindholmi* Lantz et Cyrén, 1936 – nomen nudum; see Doronin 2012]. = *Darevskia lindholmi* (Szczerbak, 1962). [Sauria: Lacertidae].

†*Lindholmemyms* Riabinin, 1935: 71. Type species – †*Lindholmemyms elegans* Riabinin, 1935. = *Lindholmemyms* Riabinin, 1935. [Testudines: Lindholmemydidae].

†Lindholmemydidae Chkhikvadze in Shuvalov et Chkhikvadze, 1975: 226. Type genus – †*Lindholmemyms* Riabinin, 1935. = Lindholmemydidae Chkhikvadze in Shuvalov et Chkhikvadze, 1975.

†Lindholmemydinae (as a subfamily of the family Dermatemydidae) Chkhikvadze in Shuvalov et Chkhikvadze, 1975 (Nessov, 1977: 79). Type genus – †*Lindholmemyms* Riabinin, 1935. = †Lindholmemydidae Chkhikvadze in Shuvalov et Chkhikvadze, 1975.

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