

**A previously undescribed skull of Steller's sea cow,
Hydrodamalis gigas (Mammalia: Sirenia: Dugongidae)
in the Hungarian Natural History Museum**

G. CSORBA¹, B. BUZÁS² & B. FARKAS³

¹*Department of Zoology, Hungarian Natural History Museum,
H-1083 Budapest, Ludovika tér 2, Hungary. E-mail: csorba@nhmus.hu*

²*H-1194 Budapest, Csiky u. 74, Hungary. E-mail: bbuzas@yahoo.com*

³*H-2464 Gyúró, Bercsényi u. 21, Hungary. E-mail: farkasbalazs@yahoo.com*

Abstract – Description of a cranium and a mandible of *Hydrodamalis gigas* stored in the Hungarian Natural History Museum is given. The remains of two specimens were collected in 1884 and were donated to the Museum by the Zoological Institute of Russian Academy of Sciences, St. Petersburg in 1957. With 5 figures.

Key words – *Hydrodamalis gigas*, skull, Hungarian Natural History Museum.

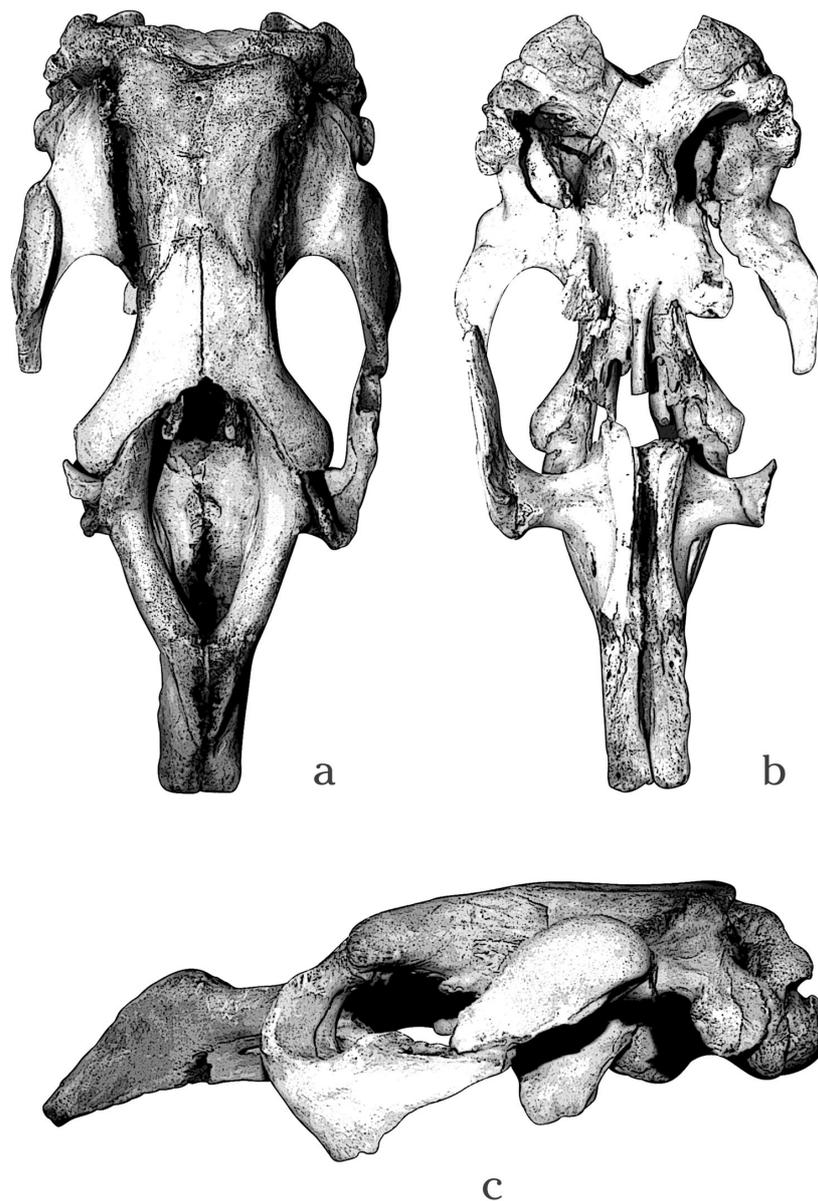
INTRODUCTION

The historic range of the largest of recent sirenians, the highly specialized *Hydrodamalis gigas* (ZIMMERMANN, 1780) was once limited to shallow waters off the Bering and Copper Islands in the Commander Island Group, Bering Sea. Discovered in the 1700's, *Hydrodamalis gigas* was confined to a handful of refugia at that time and became extinct by the year 1768 (e.g. FORSTEN & YOUNGMAN 1982). Excellent and often challenging reviews of its presumed mode of life and the factors leading to its extermination have been published (e.g. DOMNING 1978, ANDERSON 1995).

A number of scientific institutions possess osteological material of *Hydrodamalis gigas* (PILLERI 1988, STEFEN 2003), but complete skeletons, often assembled from parts of several individuals (e.g. FEILER 1999), are valued rarities in museum collections. Even the history of a particular specimen itself is sometimes of great interest (STEFEN 2003). In the present note we describe a cranium and mandible deposited in the Mammal Collection of the Hungarian Natural History Museum, Budapest (HNHM).

While the collections of HNHM survived World Wars I and II without significant losses the mineralogical and petrological collections (numbering approxi-

mately 140.000 specimens and 90.000 library materials), the geological and paleontological collections (totalling 140.000 catalogue entries and a library including 4.500 geological maps) in the National Museum's building at Múzeum körút, as

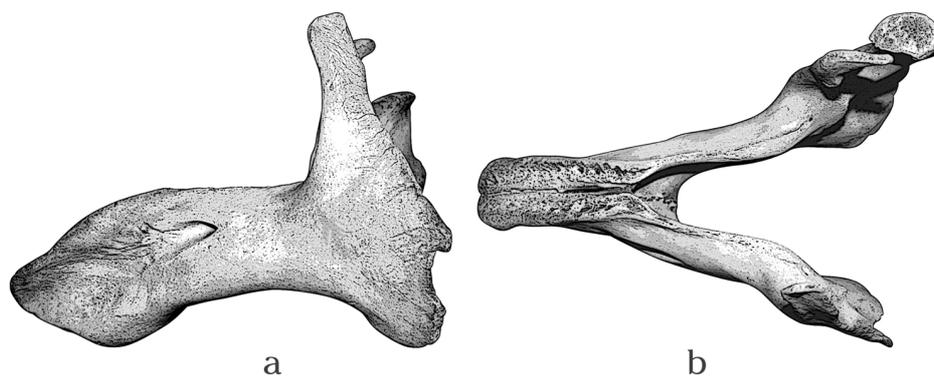


Figs 1–3. Dorsal (1), ventral (2) and lateral view (3) of cranium of *Hydrodamalis gigas* HNHM 65.11.1.

well as more than 800.000 fish, reptile, bird and invertebrate specimens of the Department of Zoology located in Baross street were burnt out by shells of Soviet troops during the 1956 revolution (KORSÓS & HORVÁTH 1996, MIHÁLYI 1996). Even though the active role of the Red Army in destroying these collections was “officially” disputed, and the credibility of the reports questioned by some (e.g. FÜLEP 1957), thousands of duplicate specimens from different animal groups housed in Soviet institutions were donated to the museum to compensate for losses. The *Hydrodamalis gigas* skull from the Zoological Institute of Russian Academy of Sciences, St. Petersburg (ZIN) was one of these duplicates. The only phrase in the catalogue of ZIN under the number 6851 concerning the specimen reads “was sent to Hungary in 1957” (A. TIKHONOV, pers. comm. 2003). The collector of the specimen, N. A. GREBNITSKIJ worked in the Russian Far East at the end of the 19th century and brought to St. Petersburg a comprehensive zoological collection including some skulls and skeletons of sea cow. However, as it is turned out during the examination of the ZIN 6851 specimen the cranium and the mandible actually belong to two different individuals, where the cranium represents a larger and the mandible a smaller specimen. Therefore the cranium is bearing the original accession number HNHM 65.11.1., while the mandible is recently inventoried under a separate number as HNHM 2004.9.1.

DESCRIPTION OF SPECIMENS

The locality is given according to the original label. The anatomical terminology followed that of DOMNING (1978); selected linear measurements are taken according to PILLERI (1988) and given in cm.



Figs 4–5. Lateral (4) and lingual view (5) of mandible of *Hydrodamalis gigas* HNHM 2004.9.1.

Hydrodamalis gigas, adult, HNHM 65.11.1. (formerly ZIN 6851), Komandorskije ostrova; o. ov. Beringa; 1884. Collected by N. A. GREBNITSKIJ. Cranium (Figs 1–3). Dentiform process missing; right jugal broken, its anterior part missing; vomer broken; palatine and middle part of maxilla missing; tympanic and petrotic bones completely missing. Condylbasal length 71; zygomatic breadth 34; breadth across occipital condyles 21.4; width of mesorostral fossa 9.

Hydrodamalis gigas, adult, HNHM 2004.9.1. (formerly ZIN 6851), Komandorskije ostrova; o. ov. Beringa; 1884. Collected by N. A. GREBNITSKIJ. Mandible (Figs 4–5). Left condyle and left posterior extremity of mandible missing. Total length 42; length from anterior tip to front of ascending ramus 28.5; height of coronoid process 29.6; height at condyle 24.3.

*

Acknowledgements – We are indebted to ALEXEY TIKHONOV for information on the ZIN 6851 Steller's sea cow specimen.

REFERENCES

- ANDERSON, P. K. (1995): Competition, predation, and the evolution and extinction of Steller's sea cow, *Hydrodamalis gigas*. – *Marine Mammal Science* **11**(3): 391–394.
- DOMNING, D. P. (1978): Sirenian evolution in the North Pacific Ocean. – *University of California Publications in Geological Sciences* **118**: 1–176.
- FEILER, A. (1999): Ausgestorbene Säugetiere, Typusexemplare und bemerkenswerte Lokalserien von Säugetieren aus der Sammlung des Staatlichen Museums für Tierkunde Dresden (Mammalia). – *Zoologische Abhandlungen (Dresden)* **50**: 401–414.
- FORSTEN, A. & YOUNGMAN, P. M. (1982): *Hydrodamalis gigas*. *Mammalian Species No. 165*. – American Society of Mammalogists, Northampton, Massachusetts, 3 pp.
- FÜLEP, F. (1957): Ki az oka a Nemzeti Múzeum égésének? [Who caused the fire in the National Museum?] – *Magyarország* **1**(18): 1.
- KORSÓS, Z. & HORVÁTH, CS. (1996): A Magyar Természettudományi Múzeum rövid története. (A brief history of the Hungarian Natural History Museum.) – *Magyar Múzeumok* **2**(4): 5–9.
- MIHÁLYI, F. (1996): Mi égett el a Nemzeti Múzeumban? (What was burnt in the National Museum?) – *Magyar Múzeumok* **2**(4): 28–29.
- PILLERI, G. (1988): *Recent Sirenia in Swiss collections with special reference to osteology and comparative neurology*. – Brain Anatomy Institute, Ostermundigen, 61 pp + xxix pls.
- STEFEN, C. (2003): *Hydrodamalis gigas* (Mammalia, Sirenia, Dugongidae) material in the Museum für Tierkunde Dresden. – *Zoologische Abhandlungen (Dresden)* **53**: 205–214.