

1. Le Mulot montre une variabilité énorme (24 variantes) même en groupant les variantes autour de la norme alvéolaire (= AN dans le texte).
2. Le dent M¹ a chez le Mulot dans les populations continentales quatre racines (= AN); mais dans les populations corses et sardowes on observe cinq (= AN) en correspondance avec la situation du même dent dans une population pleistocène d'Europe centrale (Bavière).
3. Le Rat conserve l'état de cinq racines à M¹ (= AN), et probablement originaiement aussi la Souris, dont l'état récent ne montre que trois (= AN).
4. Chez toutes les espèces en question le dent M² a quatre racines (= AN) et le M³ montre trois (= AN), sauf que chez la Souris ce nombre varie assez nettement jusqu' à la disparition totale de ce dent.
5. La Souris a les racines les plus réduites de ces trois espèces de petits mammifères.

Literatur

- GATINEAU, M. (1956): Variabilité du nombre des alvéoles radiculaires du maxillaire supérieur chez le Mulot (*Apodemus sylvaticus* L.) et chez la Souris blanche (*Mus musculus* L. albinos). *Mammalia Paris* 20, 427—438.
- HEROLD, W. (1955/1956): Studien an Insel-Populationen der Waldmaus *Apodemus sylvaticus* L. *Wiss. Z. Humb. Univ. Berlin* 5, 143—149.
- HEROLD, W. (1956/1957): Über die Variabilität der Molarenwurzeln des Oberkiefers bei einigen *Apodemus*-Arten. *Wiss. Z. Humb. Univ. Berlin* 6, 237—244.
- HEROLD, W. (1960): Über die Wurzeln der Oberkiefermolaren bei *Rattus norvegicus* (Berkenhout) und *Rattus rattus* (L.). *Z. Säugetierkunde* 25, 15—23.
- HEROLD, W. (1963): Studien am Gebiß der Hausmaus (*Mus musculus* L.). *Z. Säugetierkunde* 28, 110—118.
- HEROLD, W., und NIETHAMMER, J. (1963): Zur systematischen Stellung des südafrikanischen *Gerbillus paeba* Smith, 1834 (Rodentia: Gerbillinae) auf Grund seines Alveolenmusters. *Säugetierkundl. Mitt. München* 11, 49—58.
- HEROLD, W., und ZIMMERMANN, K. (1960): Molaren-Abbau bei der Hausmaus (*Mus musculus* L.). *Z. Säugetierkunde* 25, 81—88.
- KAHMANN, H., und BROTZLER, A. (1956): Die Ernährung der Schleiereule (*Tyto alba*) und das Bild der Verbreitung kleiner Säugetiere auf der Insel Korsika. *Biol. Zbl. Leipzig* 75, 67—83.
- KAHMANN, H., und HAEDRICH, B. (1957): Eine Untersuchung an *Rattus rattus* Linnaeus, 1758 (Mamm., Rod.) auf der Insel Korsika. *Zool. Anz. Leipzig* 158, 233—257.
- MOHR, E. (1938): Die freilebenden Nagetiere Deutschlands und der Nachbarländer. Jena.
- VEJCHODSKY, M.-Ch. (1958): Die Variabilität der Zahnalveolen von *Apodemus sylvaticus*, *Mus musculus* und *Rattus rattus*, untersucht an Inselpopulationen (Elba, Korsika und Sardinien). Zulassungsarbeit zur Prüfung für das Lehramt an höheren Schulen in Bayern 1—27.
- ZEJDA, J. (1965): Zur Variabilität der Molarenwurzeln des Oberkiefers von vier *Apodemus*-Arten. *Z. Morph. Ökol. Tiere* 54, 699—706. (Diese Untersuchung bestätigt das Ergebnis von HEROLD bezüglich Waldmaus und wurde im Text nicht zitiert.)

Anschrift des Verfassers: Prof. Dr. H. KAHMANN, 8 München 82, Waldschulstraße 42

Slit nostrils of equids

By MARY AIKEN LITTAUER

Eingang des Ms. 15. 3. 1968

The practice of slitting the nostrils of equids, which still obtains today in Iran for asses (fig. 1), is very ancient. It is first evidenced on chariot horses in 18th-dynast Egypt. Figure 2 shows a relief from Tel el Amarna (2nd quarter of the 14th century B. C.)



Fig. 1. Donkey with slit nostrils, in Iran (Photo: LOUISE LAYLIN FIROUZ)

with horses whose nostrils are slit. Egyptian bridles show a noseband placed very low. In the tomb of Thoutmosis IV (died 1402 B. C.) the excavators found bridles with "reins fixed to the nose-strap", and state "We believe that the command of the horses was obtained simply by the nose-strap" (CARTER and NEWBERRY, 1904, 25, 26). And no bits were found with the bridle material from the tomb of Tut-Ankh-Amen (CARTER and MACE, 1923, 173).

These nosebands were adjusted so low as to have exerted a painful pressure on the soft part of the nose — a condition of their effectiveness, then as today. But one of the disadvantages of this type of control is that it interferes with breathing. It is therefore possible to suggest that the original slitting of the nostril was in an attempt to compensate for the impairment in breathing caused by the "dropped noseband". The more so, since with the universal adoption of the bit in the Near East, the practice disappears. Assyrian and Persian horses show neither "dropped nosebands" nor slit nostrils — nor do Greek or Roman.

Slit nostrils are next documented from a very different time and area. In 786 A. D. two Italian bishops, GEORGE and THEOPHYLACT, were sent by Pope HADRIAN to attend the Synod of Chelsea in Anglo-Saxon England. Among other local practices of which they disapproved was the slitting of horses' nostrils (DENT, 1962, 70, 71).

But at least by the 15th century A. D. this custom obtained in Italy itself (fig. 3). And the horse in SODOMA's painting of St. George and the Dragon (in the National

Gallery in Washington, D. C.) shows it in the first half of the 16th century. Powerful bits, rather than “dropped nosebands” were in use at the time, and the practice cannot be attributed to an effort to overcome the effects of the latter. It seems as if there may have been simply a general belief that it would improve breathing.

In the 17th century, the practice of slitting the nostrils is discussed by JACQUES DE SOLLEYSSEL (1617–1680), the first Frenchman to write a regular veterinary work. Accompanying a diplomatic mission to Germany in 1645, he profited by the occasion to learn the language and to study German horsemanship and veterinary methods. In his *parfait marechal* (6th edition, Paris 1685, Tome Second, 11) he wrote, “The nostrils should be wide open, so that the carmine inside is seen when they are distended; nostrils thus open contribute not a little to the ease with which a horse breathes”.

“It is for this reason that the Spaniards and many other peoples slit the nostrils . . . Slit nostrils serve another purpose besides easing the breathing of horses, which is that they are very practical because they prevent the horse from whinnying, which is very convenient for those who go on a scouting party, because then the whinnying does not betray them. This is why they slit the nostrils, because they rarely whinny thereafter”.

“In Germany and in the north almost all crop-eared horses [military horses] have slit nostrils, even when their wind is good. In France, on the contrary, they only slit the nostrils of wretched horses with broken wind.”

Ease of breathing was the alleged reason for this practice in Iceland into the 2nd half of the 19th century, and in North Africa at least as late as the turn of the century. It was still used in Mongolia in the nineteen twenties, as it had been in 17th-century France — in an effort to heal brokenwinded horses (HILL, 1929 and 1965, 34, 35). Mrs. LOUISE LAYLIN FIROUZ informs me that the purpose of slitting donkeys’ nostrils today in Iran is the supposed aid it gives to breathing.



Fig. 2. 14th century B. C. Egyptian chariot team showing slit nostrils. From a relief in the NORBERT SCHIMMEL Collection, New York (Photo: courtesy of Mr. SCHIMMEL)



Fig. 3. Four studies of horses' muzzels, with slit nostrils. By PISANELLO (1395–1455) (Photo: after HILL, 1965)



Fig. 4. St. George and the dragon, by SODOMA (1477—1549) (Photo: National Gallery of Art, SAMUEL H. KRESS Collection 1947, Washington, D. C.)

Literatur

CARTER, H., and NEWBERRY, P. (1904): The Tomb of Thoutmosis IV, Catalogue Generale des Antiquites du Musee du Caire.

CARTER, H., and MACE, A. C. (1923): The Tomb of Tut-Ankh-Amen. New York.

DENT, A. A. (1962): The Foals of Epona, London.

HILL, GEORGE F., (1929 and 1965): Drawings by Pisanello. Paris and Brussels, Toronto.

Author's address: MARY AIKEN LITTAUER, Hillside Farm, P.O.B. 2, Syosset, Long Island, N. Y. 11791, USA

ZOBODAT - www.zobodat.at

Zoologisch-Botanische Datenbank/Zoological-Botanical Database

Digitale Literatur/Digital Literature

Zeitschrift/Journal: [Mammalian Biology \(früher Zeitschrift für Säugetierkunde\)](#)

Jahr/Year: 1967

Band/Volume: [34](#)

Autor(en)/Author(s): Littauer Mary Aiken

Artikel/Article: [Slit nostrils of equids 183-186](#)