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## Suidae and Tayassuidae (Artiodactyla, Mammalia) from the Miocene of Przeworno in Lower Silesia

**ABSTRACT:** Remains of Suidae, *Conohyus simorrensis* (Lartet) and of Tayassuidae, *Taucanamo sansaniense* (Lartet), from the Middle Miocene karst localities at Przeworno in Lower Silesia are described. The ecologic requirements of these species are discussed, and environmental conditions of this locality are postulated as presenting different habitats of swampy forest and of a nearby steppe.

### INTRODUCTION

The marble quarry at Przeworno, situated on the foreland of the Sudetes Mts, about 50 km south from Wrocław, Lower Silesia (see Text-fig. 1) yielded three Miocene karst localities (Głazek & al. 1971): Przeworno 1 and Przeworno 2 contain vertebrate remains, whereas Przeworno 3 a unique beetle fauna. The age of the particular localities was precised as: Przeworno 1 — upper Burdigalian (Karpethian), Przeworno 2 — younger Vindobonian (Tortonian, Badenian), and Przeworno 3 — Sarmatian (cf. Głazek & al. 1972, 1975; Galewski & Głazek 1973).

The present paper is one of the series of publications on vertebrates from the Miocene of Przeworno (Głazek & al. 1971; Kowalski & Zapfe 1974; Kubiak 1975, 1978, 1981a,b, Młynarski 1976, 1978, 1980). Within the territory of Poland two species of Suiformes were described from Opole by Wegner (1913) and two species from Przeworno by Sulimski (in: Głazek, Oberc & Sulimski 1971, 1972).

During the years 1971—1979 a rich material was collected which at Przeworno allowed to distinguish the species occurring and to verify the systematic position of some previously described remains. The excavations were carried out by the Institute of Systematic and Ex-

perimental Zoology, Polish Academy of Sciences in Cracow. The material from those expeditions is housed at the mentioned Institute.

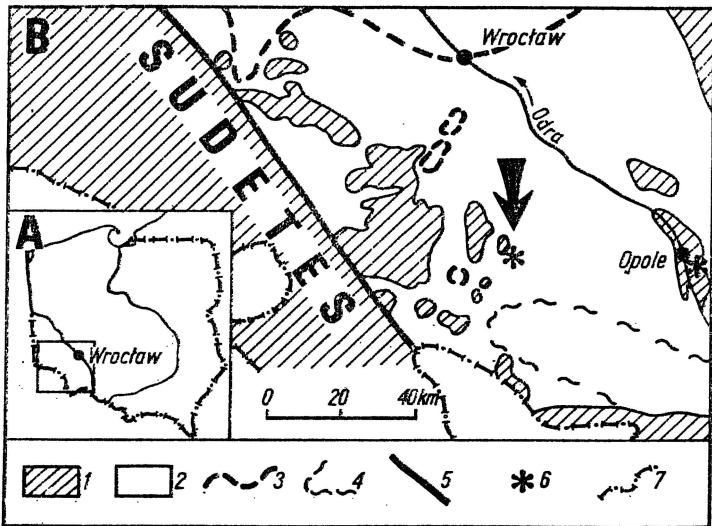


Fig. 1. General map of Poland (A) and geological sketch map of the region surrounding Przeworno in Lower Silesia (B); taken from Głazek & al. (1971, Text-fig. 1)

1 pre-Tertiary substrate, 2 young Tertiary clays, 3 extent of Miocene brown-coal formation, 4 extent of Lower Tortonian marine deposits within Eastern Sudetic Foreland, 5 marginal Sudetic fault, 6 Miocene vertebrate faunas (the arrow points to Przeworno), 7 state frontier

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#### SYSTEMATIC DESCRIPTION

Order *Artiodactyla* Owen, 1948

Suborder *Suiformes* Jaekel, 1911

Family *Suidae* Gray, 1921

Subfamily *Tetraconodontinae* Simpson, 1945

Genus *CONOHYUS* Pilgrim, 1926

*Conohyus simorrensis* (Lartet, 1851)

(Text-figs 2—3, Pl. 1, Figs 1—3; Pl. 2, Figs 1—6)

**Material:** A well preserved right upper C<sup>?</sup> from Przeworno 1 (No. MF/1707/80—1); fragment of left lower jaw with P<sub>1</sub>—M<sub>3</sub> (No. MF/1707/80—2), and isolated teeth: left upper C<sup>?</sup> (No. MF/1707/80—3), three left lower C<sup>?</sup> (Nos MF/1707/80—4, 5, 6), right M<sup>2</sup> (No. MF/1707/80—7), left M<sup>2</sup> (No. MF/1707/80—8) from Przeworno 2.

Table 1

Dimensions of teeth of *Conohyus simorrensis* (Lartet) from Przeworno, compared with the other finds

	Locality	Collection	Inventory number	Length/Width (in mm)
C ♀ (upper)	Przeworno 1	Cracow	MF/1707/80-1	17.0/7.5
	Przeworno 2	Cracow	MF/1707/80-3	17.7/8.2
C	Göriach	Graz	3856	16.3/8.2
	Göriach	Graz	3857	17.0/9.0
M <sup>2</sup>	Przeworno 2	Cracow	MF/1707/80-7	19.6/17.5
	Göriach	Graz	3820	18.5/18.2
	Wiesberg	Mainz	1932/267	18.9/17.5
	Wiesberg	Mainz	1934/854	18.1/16.7
	Steinheim	Stuttgart	M 20223	17.9/17.9
C ♀ (lower)	Przeworno 2	Cracow	MF/1707/80-4	10.7/7.7
	Przeworno 2	Cracow	MF/1707/80-5	11.3/7.1
	Przeworno 2	Cracow	MF/1707/80-6	10.6/6.7
	Göriach	Graz	1857	10.3/7.0
P <sub>4</sub>	Przeworno 2	Cracow	MF/1707/80-2	17.5/13.7
	Göriach	Graz	1857	18.9/15.2
	Göriach	Graz	1879	20.2/15.3
	Göriach	Graz	1858	18.9/15.0
	Steinheim	Stuttgart	M 4811	16.3/11.8
	Steinheim	Stuttgart	M 5280a	18.1/13.5
	Steinheim	Tübingen	Ma 1178/37	16.5/12.6
	Steinheim	Tübingen	Ma 1178/38	17.6/12.4
	La Grive-St. Alban	Basel	GA 3886	20.0/14.0
	Upper Freshwater Molasse	München	1950 f 49	20.3/14.9
M <sub>1</sub>	Przeworno 2	Cracow	MF/1707/80-2	18.0/13.4
	Göriach	Graz	1879	18.0/12.0
	Steinheim	Stuttgart	M 5280b	17.6/12.1
	Steinheim	Stuttgart	M 12770b	18.5/12.4
	Steinheim	Tübingen	Ma 1178/39	17.1/12.3
M <sub>2</sub>	Przeworno 2	Cracow	MF/1707/80-8	20.6/15.5
	Przeworno 2	Cracow	MF/1707/80-2	20.3/16.2
	Göriach	Graz	1857	18.3/14.6
	Göriach	Graz	1879	21.0/ -
	Göriach	Graz	1858	18.5/14.5
M <sub>3</sub>	Przeworno 2	Cracow	MF/1707/80-2	28.5/17.0
	Steinheim	Stuttgart	M 4811	25.2/14.5
	Steinheim	Stuttgart	M 5280a	26.4/15.4
	Steinheim	Stuttgart	M 5280b	26.4/15.2
	Steinheim	Tübingen	Ma 1178/39	25.4/15.0
	Wiesberg	Mainz	1931/3770	26.9/16.8
	Göriach	Graz	1859	24.0/14.2

Localities cited: Göriach in Styria, Austria (measurements after Thenius 1956); La Grive-St. Alban near Lyon Dep. Isère, France after Hünermann 1968); Upper Freshwater Molasse (after Hünermann 1968); Steinheim am Albuch, Baden-Württemberg, GFR (after Hünermann 1968); Wiesberg near Gau-Weinheim, Rheinland-Pfalz GFR (after Hünermann 1968);

Collections cited: Basel — *Naturhistorisches Museum*; Graz — *Joanneum*; Cracow — *Institute of Systematic and Experimental Zoology, Polish Academy of Sciences*; Mainz — *Naturhistorisches Museum*; München — *Bayerische Staatssammlung für Paläontologie und historische Geologie*; Stuttgart — *Museum für Naturkunde*; Tübingen — *Paläontologisches Museum der Universität*

**Dimensions:** The length of teeth  $P_4-M_3$  of the left lower jaw (MF/1707/80-2) is 84.5 mm. Dimensions of the teeth from Przeworno as compared with those from other localities (Table 1) appear to be rather larger.

**Description.**—In the upper, C ♀ two roots occur. The high, antero-posteriorly elongated, but transversally narrowed crown shows a distinct longitudinal sagittal crest. Due to these features the canines are similar in shape to the premolars. The buccal side of the canine is convex.

The right upper C ♀ from Przeworno 1 is very close to the left upper C ♀ from Przeworno 2 in shape and dimensions.

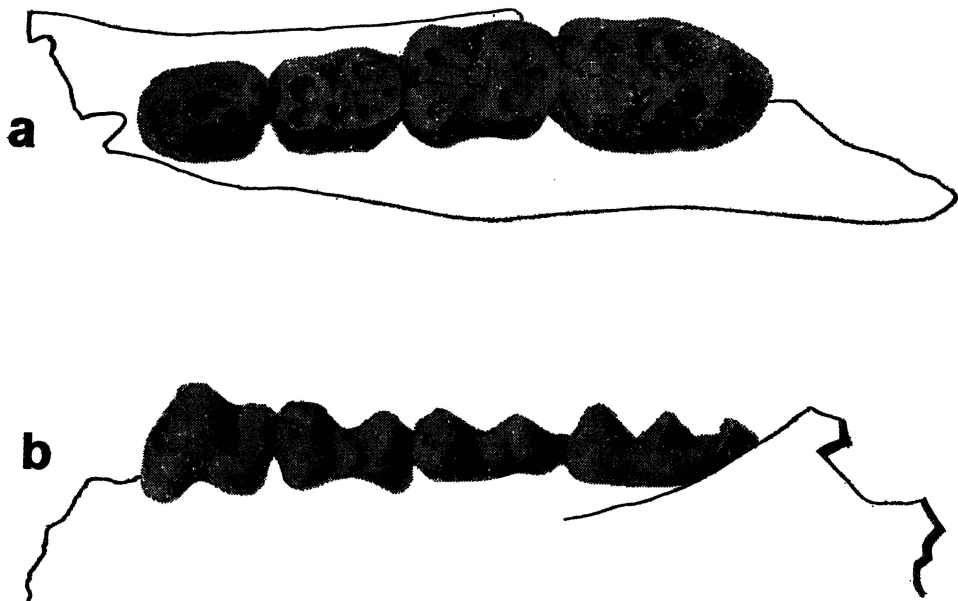


Fig. 2. *Conohyus simorrensis* (Lartet)  $P_4-M_3$  sinistra (MF/1707/80-2) from Przeworno 2

a occlusal, b buccal view (compare also Pl. 1, Figs 1-2); nat. size

The lower C has a large root and a distinct crown. The whole canine is laterally compressed and shows a rounded triangle-shaped cross-section.

The crown of the left  $M_2$  is of a rectangular shape. The hypoconulid and the entoconid are distinctly separated from the proto- and metaconid by a transversal fossa. The talonid is weakly developed. The enamel is strongly folded which is especially well visible on unworn teeth.

The teeth within the left lower jaw ( $P_4-M_3$ ) are slightly worn. According to the well developed  $M_3$  the jaw comes from an adult. In the distal part of the broken jaw the alveolus of the canine is visible; large dimensions of this alveolus indicate a huge canine probably of a male because the female canines are considerably smaller.

The  $P_4$  with a broad high crown has three roots. The sagittal ridges of the laterally narrowed main cusp are ending in a para- and respectively metastyl. The height of the crown ranges over the remaining teeth. Cingulum distinctly developed buccally but not visible at the lingual side. The parastyl ranges far distally, and the transversal fossa divides it from the talonid. The surface of the enamel considerably folded.



*Discussion.* — In the jaw (No. MF/1107/80-2) among other teeth the  $P_4$  is well preserved, and it shows characteristic differences between *Conohyus simorrensis* and *Hyotherium soemmeringi*: the main cusp of  $P_4$  in *Conohyus* is undivided, and in *Hyotherium* divided into a proto- and metaconid. Another difference is visible in  $M_3$ . The talonid in *Hyotherium* being elongated and narrow.

The incisor from Przeworno 1 described by Sulimski (in Głazek, Oberc & Sulimski 1971, p. 503, Pl. 6, Fig. 6) as belonging to *Hyotherium* aff. *soemmeringi* Meyer, in the present writer opinion belongs to *Conohyus simorrensis* (Lartet).

Presumably, the remains of *Conohyus simorrensis* have been described in previous papers as *Hyotherium soemmeringi*, although it was already Hofmann (1889, p. 559) who mentioned that among the remains from Göriach (Styria, Austria) two species may occur. Stehlin (1899/1900, p. 50) described one form as belonging to *simorrensis* and Pilgrim (1926) recognized definitely two genera: *Hyotherium* and *Conohyus*. According to Viret (1961, p. 914) *Hyotherium simorrense* Lartet does not belong to the genus *Conohyus* Pilgrim, 1926, which is closer to the primitive representatives of the genus *Palaeochoerus* Pomel, 1847. However, according to recent authors (e.g. Hünemann 1968, p. 37; Schmidt-

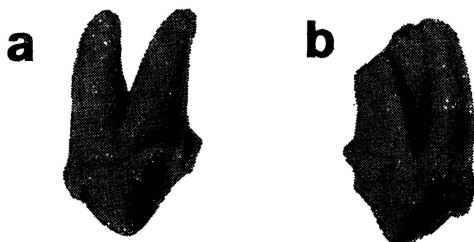


Fig. 3. *Conohyus simorrensis* (Lartet) from Przeworno

- a buccal view of upper left  $C_4$  ♀ (MF/1707/80-3) from Przeworno 2,  
b buccal view of upper right  $C_4$  ♀ (MF/1707/80-1) from Przeworno 1; nat. size

-Kittler 1971, p. 160; Thenius 1970, p. 327) the *simorrensis* species belongs to the genus *Conohyus*, and this very opinion is kept by the present author.

Hünemann (1968), however, mentioned also a small form of *Conohyus*, and he stated that the nomenclature of the species *Conohyus simorrensis* is unclear yet.

Thenius (1952, p. 72; 1956, p. 357) divides *Conohyus* into two subspecies differing morphologically and ecologically: *Conohyus simorrensis simorrensis* being a species characteristic for a moisty, swampy woodland (*Sumpfwaldform*) and *Conohyus simorrensis steinheimensis* being confined to a more arid environment.

The species *Conohyus simorrensis* (Lartet) was described from the Miocene deposits of Simorre, and it is also known from several Middle and Upper Miocene localities in France, South Germany, Switzerland and Austria. In Poland it is known from Opole (Wegner 1913, p. 248) and Przeworno.

According to Mottl (1970) the suids are characteristic for the particular stages of the Miocene, and thus the *Hyotherium*-fauna is typical of the Karpathian, the *Conohyus*-fauna of the Badenian and *Listriodon splendens*-fauna of the Sarmation.

The occurrence of *Conohyus simorrensis* both in Przeworno (1 and 2) (cf. also Głazek, Oberc & Sulimski 1971, p. 501 and Pl. 7, Figs 4 abcd) indicates a Badenian age for the both localities. In spite of the opinion of Głazek, Oberc & Sulimski (1971, 1972) and Głazek, Galewski & Wysoczański-Minkowicz (1977) that Przeworno 1 is older and belongs to the Lower Miocene (Upper Burdigalian),

and Przeworno 2 is of Younger Vindobonian age, the present writer indicates the Badenian age of the fauna both from Przeworno 1 and 2.

Rabeder (1978) gives a faunal list of species occurring in the most important European localities of Badenian age, *Conohyus simorrensis* being reported from Kleinhadersdorf (NE Austria), Devinska Nová Ves (Czechoslovakia), Göriach (Styria, Austria), St. Oswald b. Gratwein (Styria, Austria), and Mala Miliva (Serbia, Yugoslavia).

Order **Artiodactyla** Owen, 1848

Suborder **Suiformes** Jaekel, 1911

Family **Tayassuidae** Palmer, 1897

Subfamily **Dolichoerinae** Simpson, 1945

Genus **TAUCANAMO** Simpson, 1945

(=*Choerotherium* Lartet non Cautley & Falconer)

*Taucanamo sansaniense* (Lartet, 1851)

(Text-figs 4—5 and Pl. 2, Figs 7—10; Pl. 3, Figs 1—3)

**Material:** Well preserved lower jaw (MF/1708/80) with  $I_1$ — $I_2$ , C and strongly worn  $P_1$ — $M_3$ ; complete mandible (MF/1710/80) with right  $I_1$ , C,  $P_1$ — $P_4$ ,  $M_3$ , and left C,  $P_1$ — $M_3$ ; fragment of left maxilla (MF/1711/80) with  $P^1$ — $M^3$ ; the material coming from Przeworno 2.

**Dimensions:** The length of teeth  $P^1$ — $M^3$  of the left upper jaw (MF/1711/80) is 39.5 mm. The length of the teeth C— $M_3$  of the lower jaw (MF/1708/80) is 64.7 mm, the length of  $P_1$ — $M_3$  is 52.3 mm. The dimensions of the second jaw (MF/1710/80) are respectively 59.3 mm and 49.3 mm. Dimensions of the teeth from Przeworno as compared with those from other localities (Table 2) are smaller than from finds in Austria.

**Description.** — The well preserved lower jaw (MF/1708/80) supports the complete right and left tooth-rows. The heavily worn teeth indicate that same the jaw belongs to an adult. The bodies of the mandible are equal in their height (20 mm) beginning from  $P_2$  to  $M_3$  in lateral aspect. The upper line (supporting the teeth) and the lower one are straight and parallel. Two mental foramina are situated below  $P_2$  and  $P_4$ .

The incisors ( $I_1$ — $I_2$ ), at their upper parts are strongly worn and as a result of it dorso-ventrally flattened. The roots are long. The enamel covered part is about 1/4 of the whole length of the incisor ( $I_1$ ).

The left canine is broken, the right one is well preserved, and it ranges from the mandibular bone to its tip 25 mm. Its superior part is sharply ended. In cross section this canine is triangular, and its posterior strongly worn wall shows sharp edges.

All of the premolars ( $P_1$ — $P_4$ ) have two long roots. The height of the crowns is about 1/3 of the total height of these teeth. The crowns are rather narrow

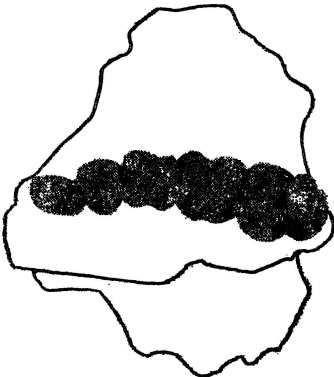


Fig. 4. *Taucanamo sansaniense* (Lartet)  $P^3$ — $M^3$  (MF/1711/80) from Przeworno 2; occlusal view (compare also Pl. 2, Figs 7—8); nat. size

and anterior-posteriorly elongated. In  $P_1$ — $P_2$ , only one cusp may be recognized. Contrary to Thenius (1956, p. 368) the  $P_4$ , shows a main cusp and a posterior small one.

The strongly worn  $M_1$  has a rectangle shape. No crown pattern is visible. The crown being completely worn down. The rectangle-shaped  $M_2$  is also strongly worn and no cusps are visible. In  $M_3$  the division into two crests and a talonid may be recognized. The cusps are worn, the talonid is strong and slightly worn, and the thick enamel is well visible.

The second jaw (MF/1710/80) is similar in shape, but not all of the teeth are preserved: the incisors are represented by the right  $I_1$ . The right  $M_1$ — $M_2$  are lacking; the left side of the mandible supports the complete dentition C— $M_3$ .

The fragmentary preserved left upper jaw (MF/1711/80) supports  $P^s$ — $M^s$ : all

Table 2

Dimensions of teeth of *Taucanamo sansaniense* (Lartet) from Przeworno, compared with the other finds

	Locality	Collection	Inventory number	Length/Width (in mm)
P <sup>3</sup>	Przeworno 2	Cracow	MF/1711/80	6.5/4.5
	Leoben	Graz	56633	8.8/5.3
P <sup>4</sup>	Przeworno 2	Cracow	MF/1711/80	6.0/6.5
	Leoben	Graz	56633	7.1/7.4
M <sup>1</sup>	Przeworno 2	Cracow	MF/1711/80	8.2/7.4
	Leoben	Graz	56633	8.8/8.8
M <sup>2</sup>	Przeworno 2	Cracow	MF/1711/80	9.5/9.0
	Leoben	Graz	56633	10.0/9.3
	Leoben	Graz	56699	12.5/11.0
M <sup>3</sup>	Przeworno 2	Cracow	MF/1711/80	11.2/9.0
	Leoben	Graz	56633	11.7/10.0
	Leoben	Graz	56699	12.8/11.8
P <sup>1</sup>	Przeworno 2	Cracow	MF/1708/80	4.6/3.4
P <sup>2</sup>	Przeworno 2	Cracow	MF/1708/80	5.7/3.5
	Przeworno 2	Cracow	MF/1710/80	5.7/3.3
P <sup>3</sup>	Przeworno 2	Cracow	MF/1708/80	7.3/3.5
	Przeworno 2	Cracow	MF/1710/80	6.0/3.6
P <sup>4</sup>	Przeworno 2	Cracow	MF/1708/80	7.4/4.9
	Przeworno 2	Cracow	MF/1710/80	7.2/5.0
	Leoben	Graz	55634	11.2/6.1
M <sup>1</sup>	Przeworno 2	Cracow	MF/1708/80	7.5/5.4
	Przeworno 2	Cracow	MF/1710/80	7.0/5.3
	Leoben	Graz	55634	11.0/7.8
M <sup>2</sup>	Przeworno 2	Cracow	MF/1708/80	10.0/7.9
	Przeworno 2	Cracow	MF/1710/80	8.7/7.0
	Leoben	Graz	55634	11.8/9.3
	Leoben	Graz	56698	12.8/ -
M <sup>3</sup>	Przeworno 2	Cracow	MF/1708/80	13.5/8.0
	Przeworno 2	Cracow	MF/1710/80	12.7/7.9
	Leoben	Graz	56634	16.0/8.9
	Leoben	Graz	56698	16.5/ -

Locality Leoben in Styria, Austria (measurements after Thenius 1956; collection in the Joanneum in Graz); other localities and collections indicated in Table 1

the teeth are strongly worn, except  $M^3$ ; in  $P^3$ — $M^1$  details are not visible; their size is heavily decreasing according to the wearing process which may lead to difficulties in determining of isolated teeth, and they can be mistakenly recognized as belonging to the smaller *Taucanamo pygmaeum*. The  $M^2$  has four cusps: the buccal ones lie slightly anteriorly contrary to the lingual ones. A developed cingulum is visible in the anterior and posterior parts of this molar. The crow shows a rectangular slightly rounded shape.

Due to presence of the talon  $M^3$  has an elongated shape. Four cusps are distinctly developed. The cingulum is present only in the anterior part of the molar.

*Discussion.* — The species *Taucanamo sansaniense* (Lartet) belongs to the most characteristic suiform mammals of the European Miocene. According to Rabeder (1978, p. 472) it is known from the Badenian locality Devínska Nová Ves (Czechoslovakia). Thenius (1956, p. 369) in the monographed of the suids and tayassuids of Styria, recorded this species only from Leoben, and pointed out that the other reports from Styria are mistakes. Thus, this peccary species is not very common in Miocene localities of Central Europe.

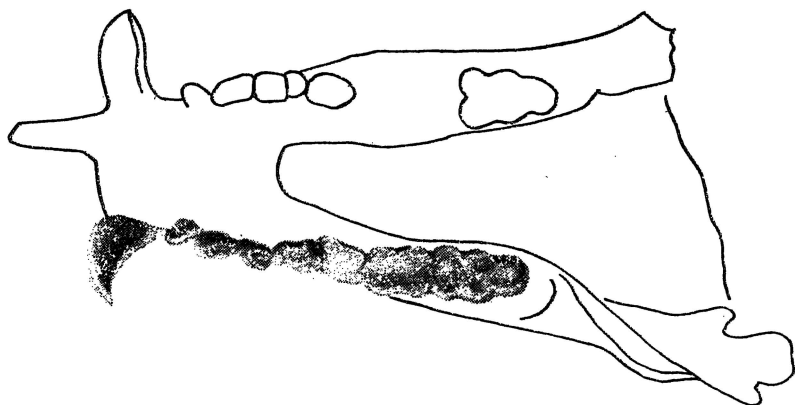


Fig. 5. *Taucanamo sansaniense* (Lartet) lower jaw with C— $M_3$  (MF/1710/80) from Przeworno 2 (compare also Pl. 2, Figs 9—10); nat. size

It ought to be mentioned that all the known remains of *Taucanamo sansaniense* from different localities show a heavily worn dentition which does not allow to recognize a detailed structure of particular teeth.

#### GENERAL REMARKS AND CONCLUSIONS

The suids as well as the peccaries (Tayassuidae) are frequently represented in the main manual localities of the European Neogene. Therefore it seems to be strange that the representatives of these mammal families have been rarely used to determine the particular stages of the Neogene. According to Hünemann (1969, pp. 715—716) there are some reasons for that fact, i.e.: the number of Suina in the

localities is not high when compared with other large mammal finds. On the other hand, the Suina remains are represented mainly by isolated teeth which are difficult to determine exactly. Finally the dentition of the Suina, in contrary to equids and mastodonts, shows only slight evolution during the Neogene.

Among the Suina, however, the suids show stronger evolutionary changes in the skull and dentition, while the dentition in the peccaries was more conservative. On the other hand, there occurred modifications in the development of the postcranial skeleton of the peccaries, namely an adaptation to a more "running" system of movement (for example the reduction of lateral phalanges). Those different trends of evolution may be observed already in the Oligocene suids and peccaries.

The Tayassuidae monographed by Stehlin (1899/1900) were treated as a subfamily of the suids. At present, this group is generally separated from the Suidae as another family (e.g. Simpson 1945, Thenius 1970).

Due to the considerable number of fossil forms the history of the Suina seems to be more or less clear now. Both families (Suidae and Tayassuidae) had perhaps common ancestors which may be found in the Eocene. Unfortunately, there ancestor group is still unknown. But, the region of their origin is undoubtedly Eurasia. The Suidae as typical representatives of the Old World never reached the New World. The peccaries (Tayassuidae), however, as a typical fossil and recent fauna element of the New World, occurred in the Tertiary also in Eurasia (for example *Dolichoerus*, „*Choerotherium*" = *Taucanamo*). Fossil finds indicate that the evolution centres of the Tayassuidae in Tertiary times come from North-America and representatives of the peccaries migrated to Eurasia through the Bering landbridge. At the end of the Tertiary the Tayassuidae became extinct in Eurasia and since the Quaternary the peccaries developed in Central and South-America (Woodburne 1968). Correlations between the evolution trends of the Suidae and Tayassuidae and the different environmental conditions in the Miocene were observed (Woodburne 1969), the Suidae being however more receptive to climatological changes of the environment. Thus, the value of these mammals as ecological indicators for forest and savanna habitats are incontrovertible. While the suids are more useful in this respect, the peccaries were able to live under different conditions.

From the territory of Poland two representatives of Suidae and Tayassuidae are known: *Conohyus simorrensis* (Lartet) and *Taucanamo sansaniense* (Lartet). According to Thenius (1956, pp. 373—322), *Conohyus simorrensis* is beside *Listriodon splendens* a characteristic suid form of the Upper Miocene sediments. This author states that *Conohyus simorrensis* may be treated as an indicator of post-Helvetian deposits. According to Thenius, in the literature there are only references about finds of *Conohyus simorrensis* from Tortonian, Sarmatian and Pannonian

localities while *Taucanamo sansaniense* is known from Helvetian, Tortonian and Sarmatian. Consequently as discussed above, the Przeworno localities 1 and 2 are recognized as being of the Badenian age.

From the ecological point of view *Conohyus simorrensis* indicates rather a swampy wood environment, and *Taucanamo sansaniense* is a species occurring among moisty wood faunas as well as among more arid steppe communities. The sediments of Przeworno (cf. Kubiak 1981b) contain a mixed fauna, similar as in Steinheim ("Mischfauna" of Heizmann 1973), which indicate the occurrence of two different habitats: a swampy forest and a more arid steppe environment close to each other.

In spite of the occurrence of only two species of *Suina* in Przeworno they are very important from the stratigraphical, ecological and faunistic point of view. As these remains lead to a correlation between the Badenian localities in Austria, Germany, Switzerland, France, Yugoslavia and Greece. Further studies are recommended to clear the stratigraphy, ecology and evolution of the European *Suina*, and for those problems the finds from Przeworno are especially valuable because in this region of Europe the remains of Miocene mammals are still rare.

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**SUIDAE I TAYASSUIDAE (ARTIODACTYLA, MAMMALIA)  
Z MIOCENU PRZEWORNA NA DOLNYM ŚLĄSKU**

(Streszczenie)

Przedmiotem pracy\* jest opis szczątków z rodzin świń i pekari ze stanowiska fauny miocenijskich kręgowców w Przewornie na Dolnym Śląsku (fig. 1), zachowanej w szczelinie krasowej we wschodniej ścianie kamieniołomu (Przeworno 1), oraz pomiędzy blokami skalnymi w głębokiej rozpadlinie w zachodniej ścianie kamieniołomu (Przeworno 2). Wiek stanowiska Przeworno 1 określano pierwotnie (Głazek & al. 1971, 1972, 1977) na dolny miocen (górną burdygę), a wiek Przeworno 2 na młodszy windobon („torton”, baden).

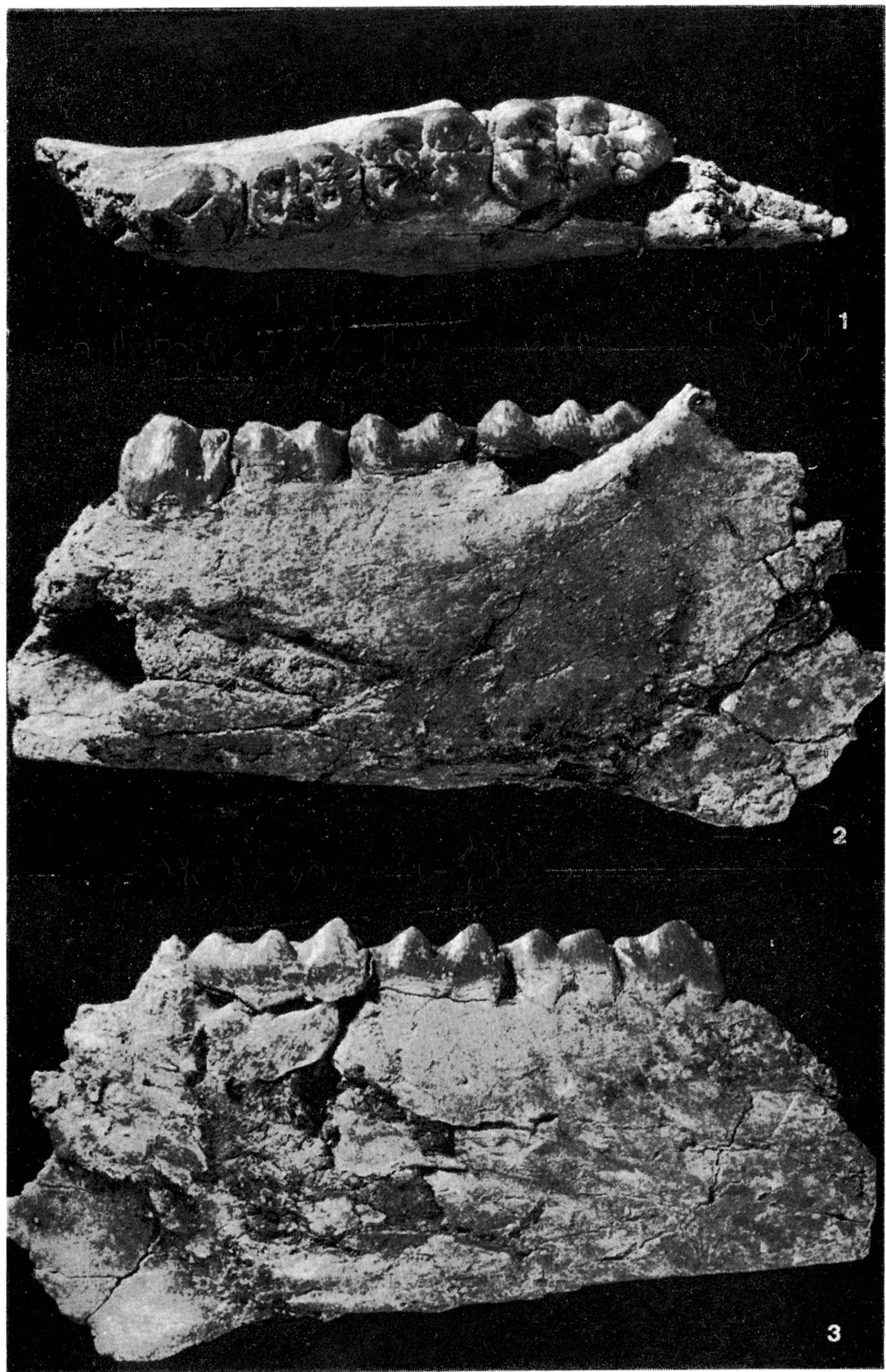
Wśród znalezionych szczątków (patrz fig. 2—5 oraz pl. 1—3) opisano świnię *Conohyus simorreensis* (Lartet) oraz pekari *Taucanamo sansaniense* (Lartet).

Szczałki osobników należących do *Conohyus* występują w obu stanowiskach Przeworna, natomiast *Taucanamo* tylko w stanowisku Przeworno 2. Dla określenia wieku tych stanowisk szczególnie przydatne są szczątki *Conohyus*, który to rodzaj jest charakterystyczny dla badenu (Mottl 1970), a według Theniusa (1956) jest wskaźnikiem utworów post-helweckich. Z kolei *Taucanamo* jest znany w Europie z helwetu, tortonu i sarmatu (Thenius 1956). Na tej podstawie oraz w oparciu o inne gatunki ssaków (por. Kubiak 1981a,b) określono wiek obu stanowisk w Przewornie na środkowy miocen (baden).

Rozpatrywane świnię i pekari związane były z różnymi środowiskami: *Conohyus* z wilgotnym lasem a *Taucanamo* zarówno z wilgotnym lasem jak i bardziej suchym środowiskiem stepowym. W konsekwencji wskazuje to na występowanie w okolicach Przeworna w miocenie dwóch różnych stanowisk: wilgotnego lasu oraz suchszych terenów typu sawanny lub stepu (por. także Młynarski 1978).

\* Praca wykonana w ramach planu międzyresortowego MR. II-3.





1—3 — *Conohyus simorrensis* (Lartet); fragment of left lower jaw with  $P_4$ — $M_3$  (MF/1707/86-2), 1 occlusal, 2 buccal, 3 lingual view. All specimens from Przeworno 2; taken in nat. size

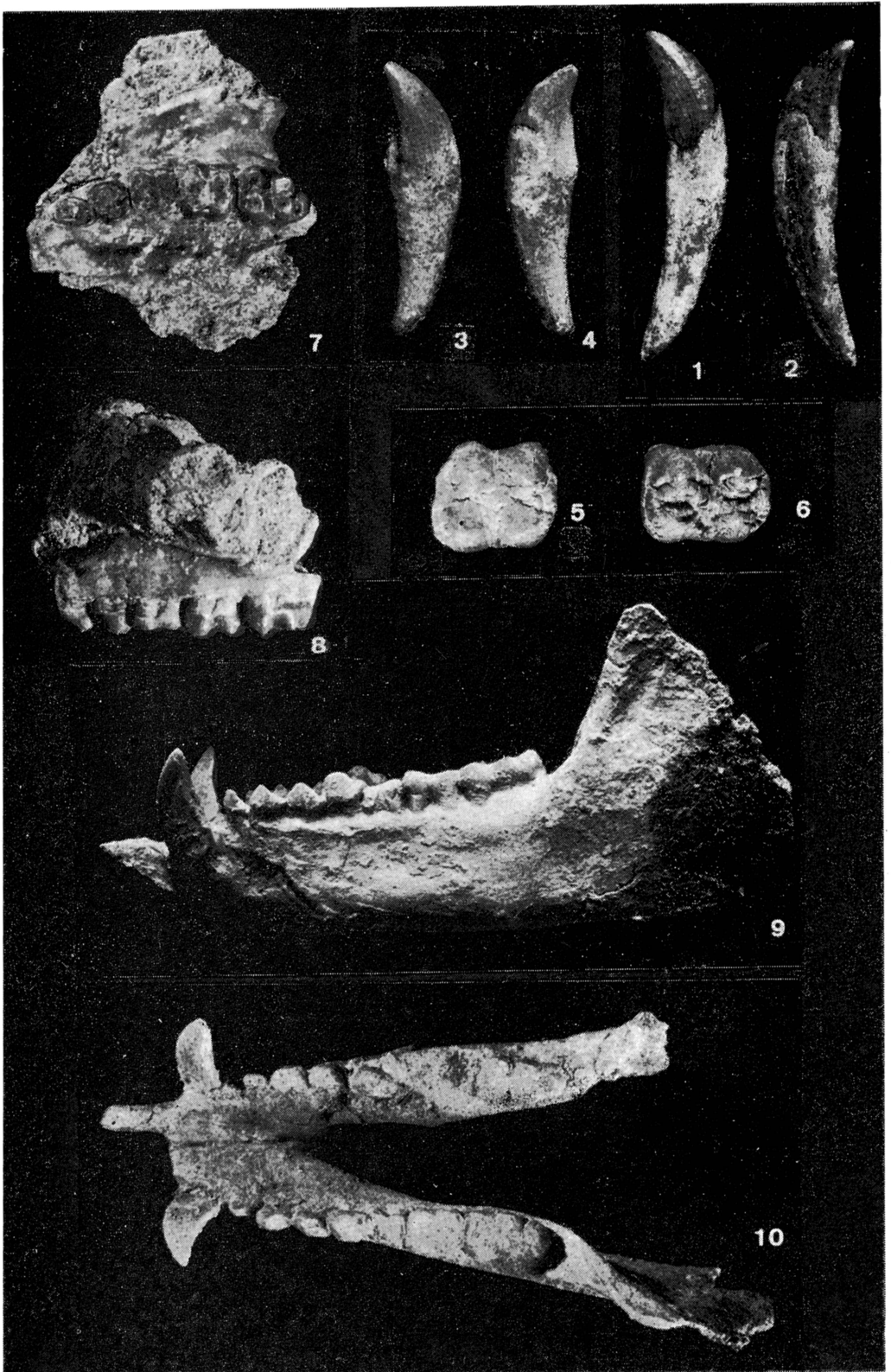
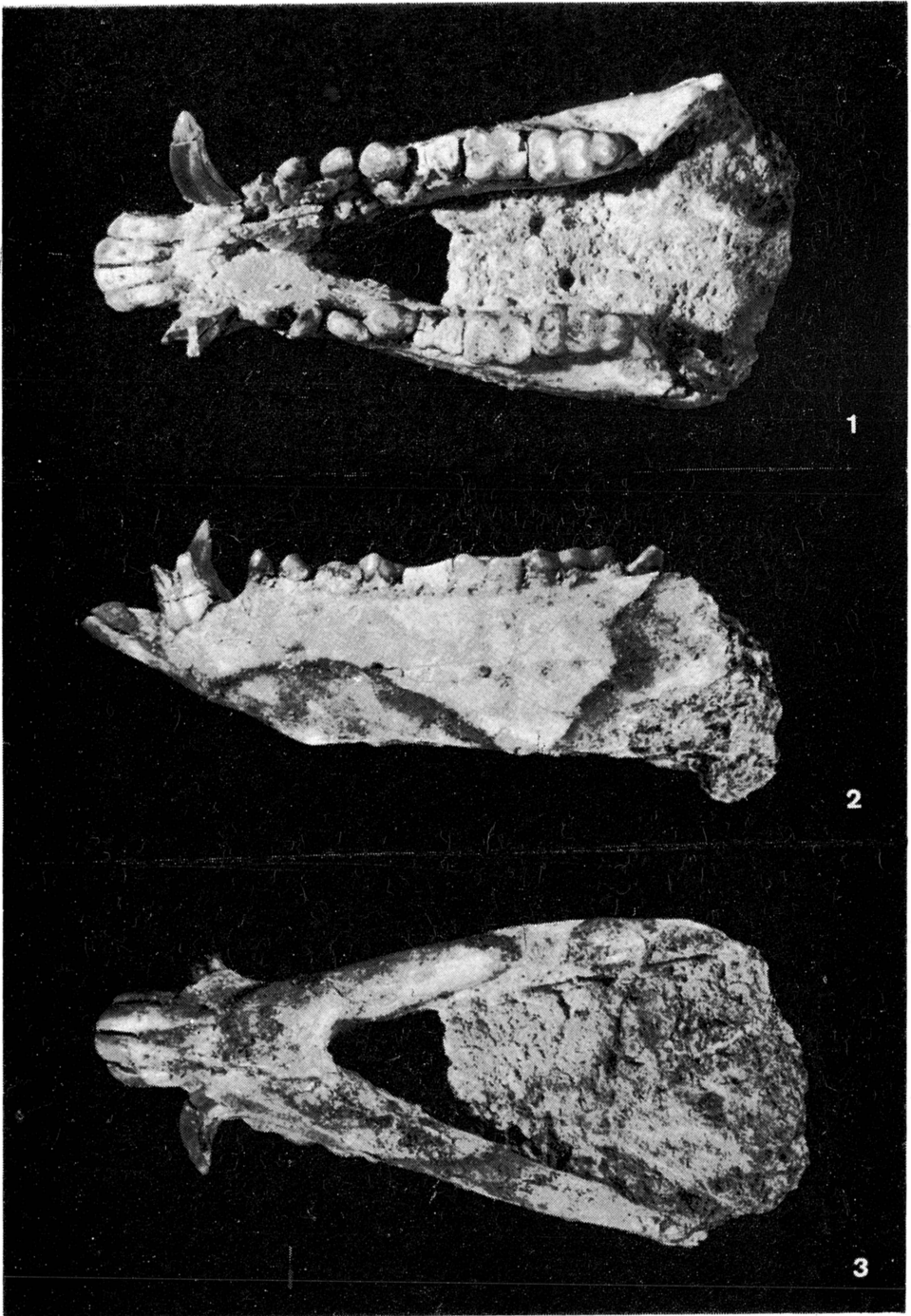


PLATE 2

- 1—6 — *Conohyus simorrensis* (Lartet): 1—2 right lower C ♀ (MF/1707/80-4) (1 buccal, 2 lingual side), 3—4 right lower C ♀ (MF/1707/80-5) (3 buccal, 4 lingual side), 5 right M<sup>2</sup> (MF/1707/80-7) (occlusal view), 6 left M<sub>2</sub> (MF/1707/80-8) in occlusal view
- 7—8 — *Taucanamo sansaniense* (Lartet); fragment of left upper jaw with P<sup>2</sup>—M<sup>2</sup> (MF/1711/80) (7 occlusal, 8 buccal side)
- 9—10 — Lower jaw (MF/1710/80) with right I<sub>1</sub>, C, P<sub>1</sub>—P<sub>4</sub>, M<sub>3</sub>, left C, P<sub>1</sub>—P<sub>4</sub>, M<sub>1</sub>—M<sub>3</sub> (9 buccal, 10 occlusal view). All specimens from Przeworno 2; taken in nat. size



1—3 — *Taucanamo sansaniense* (Lartet); lower jaw with left and right I<sub>1</sub>—I<sub>2</sub>, C, P<sub>1</sub>—P<sub>4</sub>, M<sub>1</sub>—M<sub>3</sub> (MF/1708/80): 1 occlusal, 2 buccal, 3 lower view. All specimens from Przeworno 2; taken in nat. size