POLSKA AKADEMIA NAUK
INSTYTUT ZOOLOGICZNY, ODDZIAŁ W KRAKOWIE

ACTA ZOOLOGICA CRACOVIENSIA

Tom V Kraków, 15 XI 1960 Nr 11

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Cricetidae i *Microtidae* (*Rodentia*) z pliocenu Wężów (Polska)

Cricetidae и *Microtidae* (*Rodentia*) плиоцена деревни Венже (Польша)

Cricetidae and *Microtidae* (*Rodentia*) from the Pliocene of Węże (Poland)

(With plates LVII—LXIV and 10 figures in text)

Abstract. *Cricetidae* and *Microtidae* from the Upper Pliocene bone breccia at Węże in Poland are described. The forms recovered there are: *Trilophomys pyrenaicus* (Depéret), *Microtodon longidens* n. sp., *Ungaromys weileri* (Heller), *Stachomys trilobodon* n. g., n. sp., *Dolomys hungaricus* Kormos, *Mimomys* cf. *stehlini* Kormos, *M. gracilis* (Kretzoi). Abundant remains of *Microtodon longidens* n. sp. permit to assign this species to the *Cricetidae* and suggest the identity of the genera *Microtodon* Miller, *Baranomys* Kormos and *Prosomys* Shotwell. *Stachomys trilobodon* n. g., n. sp. is the ancestor of the genus *Prometheomys* Satunin. Specimens intermediary between *Dolomys* Nehring and *Mimomys* F. Major have been found. *Germanomys* Heller is a synonym of *Ungaromys* Kormos, „*U. nanus* Kormos“ and „*Germanomys weileri* Heller“ from Gundersheim are synonymous and ought to be designed by the name *Ungaromys weileri* (Heller).

INTRODUCTION

At the village of Węże (51°06′N, 18°48′O) near Działoszyn, district of Pajęczno, in the northern periphery of the Kraków—Wieluń Highlands, a bone breccia was discovered by J. SAMSONOWICZ (1934), filling up karst potholes in the Jurassic limestone. Most probably this breccia had been formed in the bottom of a well-like cave, into which the passing by animals were entrapped. That this was so is suggested by the accumulation of fossil remains belonging both to small and large animals, as well as by the conspicuous scarcity of flying forms such as birds or bats. Some of the collected remains may, however, be regarded as owl pellets. The bone remains and the sediment in which they are embedded are strongly cemented by calcite. This greatly hampers the preparation of the breccia material of which well over ten tons in weight have been recovered.

The palaeontological investigation of the breccia has been commenced by Professor Jan STACH of the Cracow Branch of Zoological Institute of Polish Academy of Science. He described the Węże carnivores in papers published in 1951, 1953, 1954, 1957 and 1959, while the Węże reptile fossils have been studied by M. MŁYNARSKI (1953, 1955, 1956a, 1956b), the rhinoceros teeth and rests ot *Cervus* (*Rusa*) sp. by T. CZYŻEWSKA (1958, 1959) and the remains of insectivores by A. SULIMSKI (1959). Rests of *Trilophomys pyrenaicus* (DEPÉRET) (S. SCHAUB & K. KOWALSKI, 1958) and *Prospalax priscus* (NEHRING) (K. KOWALSKI, 1960c) are the rodent remains thus far described from Węże.

The following is an up-to-date list of the Węże fauna:

Reptilia

Testudines

Testudo szalaii MŁYNARSKI
Testudo antiqua noviciensis DEPÉRET
Geoemyda eureia (WEGNER)
Clemmys sp.
Emys wermuthi MŁYNARSKI

Squamata

Lacerta sp.
Ophisaurus pannonicus Kormos

Mammalia

Insectivora

Erinaceus samsonowiczi Sulimski
Sorex runtonensis Hinton
Sorex araneus L.
Sorex cf. *minutus* L.
Sorex sp.
Blarinoides mariae Sulimski
Neomys soriculoides Sulimski
Beremendia fissidens (Petényi)
Petenyia hungarica Kormos
Crocidura sp.
Suncus pannonicus (Kormos)
Suncus zelceus Sulimski
Desmana nehringi Kormos
? *Galemys* sp.
Talpa minor Freudenberg
Talpa fossilis Petényi

Rodentia

Trilophomys pyrenaicus (Depéret)
Prospalax priscus (Nehring)

Carnivora

Nyctereutes sp.
Agriotherium intermedium Stach
Ursus wenzensis Stach
Mustela pliocaenica Stach
Mustela plioerminea Stach
Martes wenzensis Stach
Arctomeles pliocaenicus Stach

Perissodactyla

Dicerorhinus cf. *megarhinus* (CHRISTOL)

Artiodactyla

Cervus (Rusa) sp.

The classification of some of the above listed Insectivores needs to be revised. Numerous remains of Chiroptera, Lagomorpha, Rodentia and Artiodactyla are now being investigated, but only a very small part of the material recovered from Węże has thus far been etched and identified. These refer the age of the Węże breccia to the Upper Pliocene.

Beds of various colouration occurred within the breccia. Their faunal composition supposedly differed too, but they have all been mixed in the course of the collection work. During the preparation of the variously coloured blocks the writer has observed fairly strong uniformity of the qualitative composition of the recovered fossil material. Nevertheless it should be kept in mind that the material from the breccia may involve a considerable lapse of time. An attempt to reconstruct the stratigraphy of the Węże breccia and to determine quantitative differences in the composition of its fauna will be undertaken in future papers dealing with that fossil site.

The remains of *Cricetidae* and *Microtidae* described in the present paper have been yielded by fragments of the Węże breccia collected in post-war years by the staff of the Cracow Branch of the Polish Academy's Institute of Zoology where they are also kept. They have been recovered by dissolving the breccia in acetic acid. In appearance the preserved remains resemble elements of owl pellets. They consist of mandibles and fragments of skulls, frequently of detached teeth. It is possible, however, that they belonged to animals who fell down into the cave and whose dead bodies were subsequently dismembered by other animals or destroyed by water. *Microtidae* and *Cricetidae* remains make up about 90% of the rodent fossil material thus far recovered from the breccia.

The absence of typical *Cricetinae* is a characteristic feature of the material studied by the writer and consisting of several hundred individuals from the here considered groups. *Microtidae* only are represented, also forms defined as „*Cricetidae incertae sedis*" whose dentition approaches that of *Microtidae*. The specific composition of the here described Węże material is as follows in figures denoting the minimum number of individuals:

Cricetidae incertae sedis

Trilophomys pyrenaicus (DEPÉRET) 4
Microtodon longidens n. sp. 27

Microtidae

Ungaromys weileri (HELLER) 6
Stachomys trilobodon n. g., n. sp. 40
Dolomys hungaricus KORMOS 45
Mimomys cf. *stehlini* KORMOS
Mimomys gracilis (KRETZOI) 130

The *Microtidae* and *Cricetidae* fauna from Węże is very peculiar and does not display distinct analogies with other, thus far described, faunas. Some slight analogies may be traced with the Polish faunas from Podlesice (K. KOWALSKI, 1956) and Rębielice Królewskie (K. KOWALSKI, 1960a). *Microtodon* MILLER is common to both these localities (but represented by different species), while *Mimomys* cf. *stehlini* KORMOS is also present at Rębielice Królewskie; similarities of the insectivore fossils recovered from all the three localities are fairly strong. Still the Węże fauna is apparently older than that either from Podlesice or from Rębielice Królewskie. Moreover, facial differences are observable too: in Rębielice Królewskie aquatic species predominate while the deep cave deposits in Podlesice show a distinct predominance of bat remains.

The Węże material show closest resemblance with the following small mammalian localities outside of Polish territory: Csarnota 2 in Hungary (M. KRETZOI, 1956, 1959; new studies in litteris), Hajnačka in Czechoslovakia (O. FEJFAR, 1957), Gundersheim (F. HELLER, 1936) and Wölfersheim (H. TOBIEN, 1952) in Germany. Fossils from Sète (L. THALER, 1955, 1956) and Val d'Arno inferiore (T. KORMOS, 1931) seems to be contemporaneous too. The occurrence of the various Węże forms in other localities will be discussed in the descriptive part of the paper.

The predominance in the Węże fauna of *Microtidae* and of species resembling them structurally associates this fauna with open, unwooded land.

The present writer here acknowledges with sincere thanks the help constantly given him by Professor Dr. Jan Stach, Head of the Cracow Branch of the Polish Academy's Institute of Zoology and the kind loan of the materials etched by him. Thanks are also due to Mr. L. Sych for the photograhies and to Mrs. J. Humnicka for the English translation of the Polish text.

SYSTEMATIC DESCRIPTIONS

Family *Cricetidae* Rochebrune 1883
Cricetidae incertae sedis

Genus *Trilophomys* Depéret 1890

***Trilophomys pyrenaicus* (Depéret 1890)**

[Pl. LVII]

1890. *Lophiomys pyrenaicus* n. sp.; Ch. Depéret, Animaux pliocènes..., p. 53—54, pl. IV, fig. 24—25.
1890. *Trilophomys pyrenaicus* Dep.; Ch. Depéret, Animaux pliocènes..., p. 122, pl. XII, fig. 2—3.
1940. *Trilophomys pyrenaicus* Dep.; S. Schaub, Zur Revision..., p. 65—74, fig. 1—7.
1951. *Trilophomys pyrenaicus* Dep.; H. G. Stehlin & S. Schaub, Die Trigonodontie..., p. 188, 388, fig. 595.
1958. *Trilophomys pyrenaicus* Depéret; S. Schaub, Simplicidentata, p. 808, fig. 271.
1958. *Trilophomys pyrenaicus* Dep.; S. Schaub & K. Kowalski, *Trilophomys...*, p. 480—483.

Material. 6 damaged mandibles with M_1—M_2, detached molars: 2 M_1, 1 M_2, 4 M^1, 2 M^2.

Description. The surface pattern and the number and position of roots in the molar teeth of our material does not differ from that described by S. SCHAUB (1940) from Rousillon.

Dimensions (in mm):

specimen No	1*	2	3	4	5	6
length of M_1—M_2 (on crowns)	2,97	2,8	3,3	2,9	2,9	—
length of M_1	1,5	1,3	1,7	1,4	1,5	1,6
width of M_1 (on hypoconid)	—	1,1	1,3	1,3	1,2	1,3
length of M_2	1,47	1,5	1,6	1,5	1,4	1,5

Length of the detached teeth is as follows: M_1 — 1,6 and 1,9 mm, M_2 — 1,7 mm, M^1 — 1,8; 1,8; 1,9 and 1,9 mm, M^2 — 1,3 and 1,4 mm.

Systematic position. On structure and dimensions of teeth our material is referable to *Trilophomys pyrenaicus* (DEPÉRET), a species described from the Pliocene of Rousillon in France. The Rousillon specimens have been described in detail by S. SCHAUB (1940), who discusses their systematic position in later papers too (H. G. STEHLIN & S. SCHAUB, 1951; S. SCHAUB, 1958). Besides Rousillon and Węże this species is also recorded from Wölfersheim in Germany (H. TOBIEN, oral communication). Its occurrence at Węże has already been reported by S. SCHAUB and K. KOWALSKI (1958).

Genus *Microtodon* MILLER 1927

= *Sigmodon* SAY & ORD 1825, partim
= *Baranomys* KORMOS 1934
= *Prosomys* SHOTWELL 1956

Microtodon longidens n. sp.

(Ps. LVIII, LIX, figs. 1; text-fig. 1)

Holotypus: incomplete mandible with M_{1-3}
Stratum typicum: Upper Pliocene
Locus typicus: Węże, Poland

Derivatio nominis: *longus* — long, *dens* — tooth. A species with teeth longer than those in *M. loczyi* (KORMOS), which is a known related form.

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* a specimen in the collection of the Naturhistorisches Museum of Basle.

Material. Incomplete skull, 14 damaged mandibles with M_1, partly also with M_2 or M_2—M_3. 5 fragmentary upper jaws with molars, one fragment with M^1—M^3. 34 detached first lower molars, numerous other detached molars.

Description. In its overall appearance the skull comes closer to the *Cricetidae* than to the *Microtidae*. The rostrum is fairly long. The sagittal suture between frontalia well discernible anteriorly. The inter-orbital region flattened, broad. Nasalia long, completely overlapping the incisives when viewed from above.

M_1 shows fairly strong individual and age variations. The surface of this tooth resembles that of *M. loczyi* (KORMOS); in young individuals the anterior loop may be smaller and less oblique, hence it displays an appearance resembling that noted in *M. atavus* (SCHLOSSER).

M_2 is similar in all the species of *Microtodon* MILLER which have thus far been described. The most anterior outer fold seems to be slightly deeper in the specimens from Węże than in those from Podlesice.

M_3 has two shallow outer re-entrant folds and two deep inner ones. In one of the specimens the anterior loop forms a completely independent field of enamel. In structure this tooth differs fundamentally from that noted in *M. atavus* (SCHLOSSER) and in *M. loczyi* (KORMOS) where it is with only one inner re-entrant fold. The structure of M_3 in *M. mimus* (SHOTWELL) in unknown.

Upper jaw dentition has not thus far been available in any representative of the genus *Microtodon* MILLER, *M. mimus* (SHOTWELL) excepted. A detached first upper molar of this form has been described, it was three-rooted, with the surface pattern with an anterior loop and 4 alternating triangles.

In the Węże specimens all the upper molars are three-rooted. M^1 has two re-entrant folds on the outer as well as on the inner side. This tooth is long and slender, with 5 enamel fields communicating by open canals.

M^2 has two deep and narrow re-entrant folds. Of these the anterior one is placed transversely to the tooth axis, while the posterior one stretches obliquely towards the back. On the outer side this tooth has one re-entrant fold which is broad

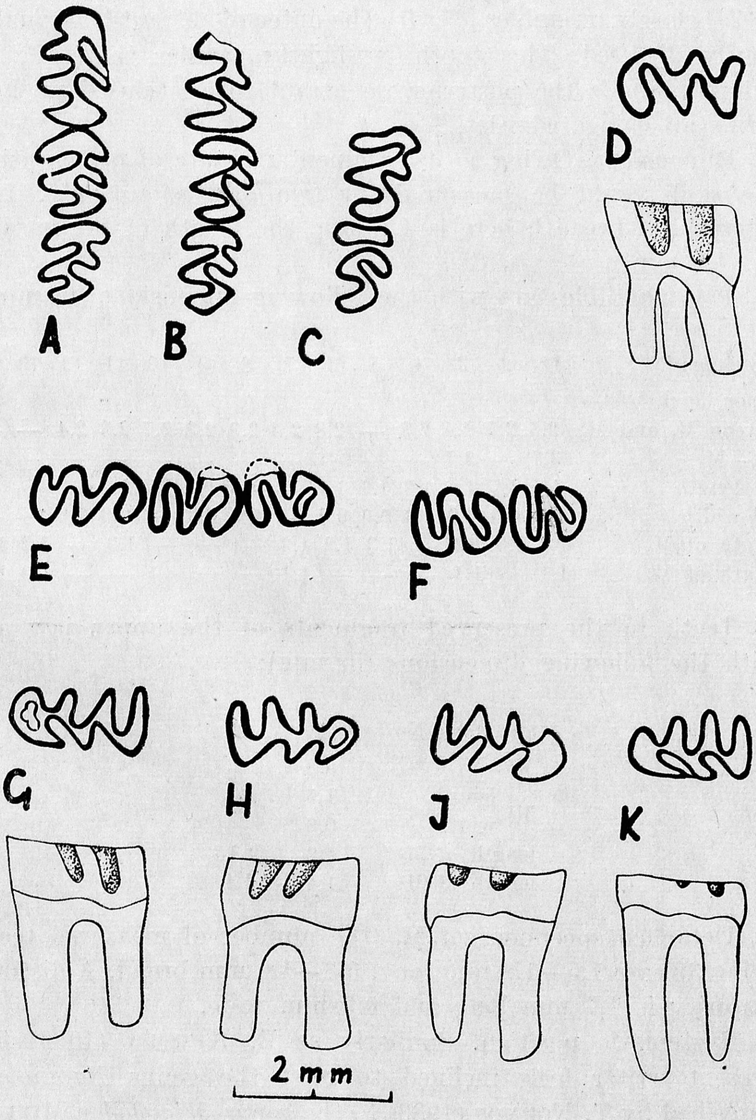

Fig. 1. *Microtodon longidens* n. sp. A: holotype, M_1—M_3; B: M_1—M_3; C: M_2—M_3; D: M^1, E: M^1—M^3; F: M^2—M^3; G—K: M_1 in different stages of wear.

and shallow. Hence there are 4 enamel fields in M_2, but the two median ones are confluent and shaped like the letter U.

M^3 closely resembles M^2 with the outer re-entrant folds analogously directed. This tooth is slightly smaller than M^2. In old individuals the posterior re-entrant fold is closed up and forms an elongated islet.

Dimensions. Owing to its fragmentary state of preservation the skull could be measured for two dimensions only. The interorbital breadth here is 4,1 mm, the length of the nasalia ca. 7,1 mm.

The mandibles are with the following dimensions (in mm):

Specimen No	1*	2	3	4	5	6	7	8	9	10	11	12	13	14
inner height between M_1 and M_2	2,5	2,7	2,4	2,3	—	2,8	2,5	2,3	2,3	2,7	2,3	2,4	—	—
M_1—M_3	3,7	—	3,7	—	—	—	—	—	—	—	—	—	—	—
M_1 length	1,5	1,7	1,5	1,7	1,7	1,7	—	1,6	1,7	1,7	1,5	1,7	—	—
M_1 width	0,9	0,9	0,9	0,9	0,9	0,9	—	0,9	0,9	—	0,9	0,9	—	—
ength of M_2	1,2	1,3	1,3	—	1,3	1,2	1,3	—	—	—	1,3	—	1,2	1,3
ength of M_3	1,1	—	1,1	—	—	—	1,1	—	—	—	—	—	1,0	1,1

Teeth in the preserved fragments of the upper jaw are with the following dimensions (in mm):

Specimen No	1	2
M^1—M^3	3,8	—
M^1 length	1,5	—
M^1 width	0,8	—
length of M^2	1,2	1,15
length of M^3	1,1	1,1

Detached specimens of M_1 (the number of measured teeth being 39) are 1,5—1,8 mm long, 0,8—1,0 mm broad. A distinct majority is 1,7 mm long and 0,9 mm wide.

Systematic position. Similarly as B. KURTÉN (1960) the present writer feels inclined to refer the genus *Baranomys* described by T. KORMOS (1933) to the genus *Microtodon* MILLER described earlier (1927). To the same genus belongs the species *Prosomys mimus*, described by J. A. SHOTWELL (1956)

* holotype

from a Hemphillian fauna of the United States of America as the representative of a new genus. Differences in the M_1-pattern in European, Mongolian and North-American form are negligible and fit into ordinary infrageneric variations. The age of the Mongolian form, assigned to the Pontian, would not by itself warrant the separation of that form into a distinct genus, all the more so since it is questionable. The assignment of the three just mentioned forms to the same genus clearly stresses their close relationship and, moreover, emphasizes the faunal connections between the Palaearctic and Nearctic provinces so characteristic of the Upper Pliocene.

Microtodon longidens n. sp. differs from the American form *M. mimus* (SHOTWELL) in somewhat smaller dimensions and more oblique position of the anterior loop in M_1. In the Mongolian species *M. atavus* (SCHLOSSER), whose best descriptions and figures have been given by S. SCHAUB (1934), the anterior loop in M_1 is less well developed and the third lower molar shorter than in the Węże specimens. *M. longidens* n. sp. likewise differs distinctly from *M. loczyi* (KORMOS) from Csarnota 2 in Hungary and from Podlesice in Poland (Mr. M. KRETZOI has recently discovered at Csarnota 2 new material, as yet not published). The fundamental difference lies in the pattern of the third upper and lower molar. In *M. loczyi* (KORMOS) these teeth are considerably shorter than those in *M. longidens* n. sp. Since, however, the first lower molar in both these forms is alike, it is difficult to decide to which of them the detached specimens of that tooth are referable. This also applies to the find from Gundersheim („*B. loczyi* KORMOS“, F. HELLER, 1936) and from Rębielice Królewskie („*Baranomys* sp.“ K. KOWALSKI, 1960a). Furthermore it is difficult to establish the exact systematic position of the detached specimen of M_1 found at Wojcieszów (German „Kauffung“) in the Sudeten Mts. by F. HELLER (1937) and described as „*Baranomys langenhani* HELLER“. Since the site of the Pliocene fauna at Wojcieszów has been destroyed by quarrying work, there is no chance for additional material to be preserved from that locality.

Family *Microtidae* COPE 1891

Genus *Ungaromys* KORMOS 1932
= *Germanomys* HELLER 1936

Ungaromys weileri (HELLER 1936)

(Pl. LIX, figs. 2—3; text-fig. 2)

1936. *Ungaromys nanus* KORM.; F. HELLER, Eine oberpliozäne..., p. 128—130, pl. X, fig. 4—5.
1936. *Germanomys weileri* n. g. n. sp.; F. HELLER, Eine oberpliozäne..., p. 130—131, pl. X, fig. 6.

Material. Fragment of mandible with M_1—M_3, three fragments with M_1, one fragment with M_2, two fragments with M_3, seven detached M_1 and several detached M_2 and M_3. The collected material probably contains some detached upper jaw teeth belonging to the studied species, but so far it has not been possible to identify them.

Description. Diastema ca. 3,5 mm long. The incisive whose only complete specimen is hardly 10 mm long (along the chord) passes below the posterior root of M_2. The molars are with early developed roots. The enamel is extremely thick. Cement is lacking in the enamel folds.

M_1 consists of a posterior loop, three enamel triangles and the anterior loop. The three enamel triangles may by completely closed, usually, however, the two posterior ones communicate by a fairly broad passage. The anterior loop displays strong individual and age variability. Two re-entrant folds usually occur in the loop: an outer and an inner one. In some individuals, however, the loop is reduced with outline similar to that in *Ungaromys nanus* KORMOS.

M_2 is provided with two rather shallow re-entrant angles on the outer side and two deep inner ones. The enamel forms three undivided fields, the alternating arrangement of the triangles is only faintly indicated.

M_3 resembles M_2, but its posterior root is markedly smaller than the anterior, and obliquely placed. M_3 is narrower than M_2, while its posterior loop is more asymmetric and more vaulted anteriorly.

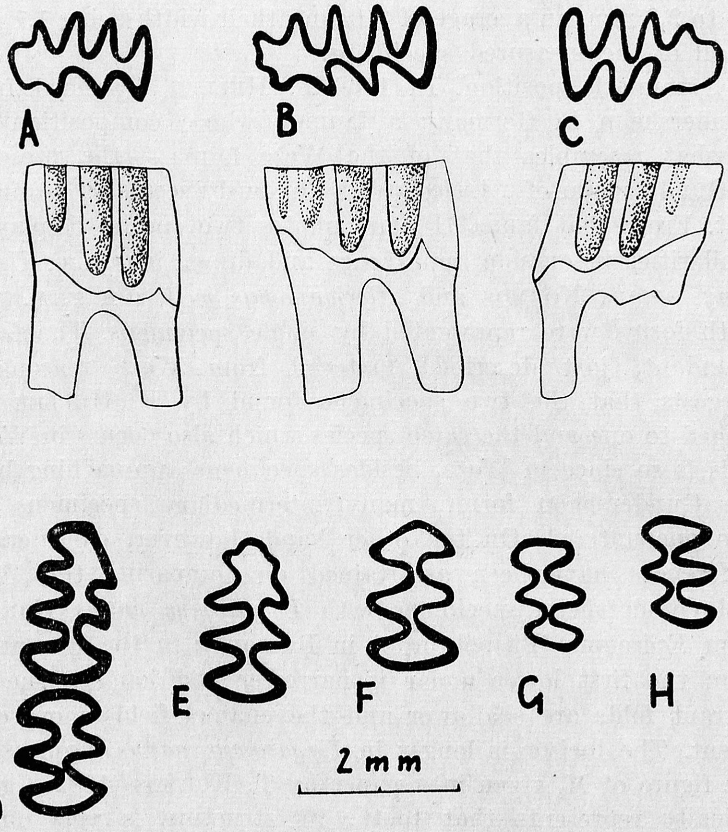

Fig. 2. *Ungaromys weileri* (HELLER). A—C: M_1; D: M_1—M_2; E: M_1 (from a fragmentary mandible); F: M_2, G—H: M_3.

Dimensions. The dimensions of the mandibular fragments are as follows (in mm):

Specimen No.	1	2	3	4	5	6	7
inner height between M_1 and M_2	—	2,7	—	—	2,9	—	—
M_1—M_2	3,5	—	—	—	—	—	—
M_1 length	1,9	2,1	2,5	2,0	—	—	—
M_1 width	1,2	1,1	1.0	1,1	—	—	—
length of M_2	1,6	—	—	—	1,7	—	—
length of M_3	—	—	—	—	—	1,4	1,4

In specimen No. 4 the lower row of teeth is ca. 5,1 mm in alveolar length.

The length of the detached first lower molars ranges from

1,9 to 2,3 mm, an average of 2,1 mm; their width being 1,1 mm in all of the measured specimens.

Systematic position. In 1936 F. HELLER described from Gundersheim in Germany a faunule whose composition somewhat resembles that of the Węże fauna — the presence in Gundersheim of „*Arvicola* sp.“ obviously seems to be incorrect. From that fauna HELLER quotes two species displaying similarities in outside appearance and dimensions, i. e. *Ungaromys nanus* KORMOS and „*Germanomys weileri* n. g. n. sp.“. Both forms were represented by single specimens. The fairly abundant, just described material from Węże reasonably suggests that the two specimens found by F. HELLER belonged to one and the same species which also occurs in Węże. This is so since in Węże, besides specimens approaching both the Gundersheim forms, many intermediary specimens are also encountered. On the other hand, however, considerable differences have been ascertained on comparing the Węże and Gundersheim specimens with *Ungaromys nanus* KORMOS from Episcopia (Püspökfürdö) in Rumania: in the Rumanian form the first lower molar is narrower and longer, the reentrant folds are shallower and the enamel fields more confluent. The incisor is longer in *Ungaromys nanus* KORMOS. If the figure of M_3 given in a paper by T. KORMOS (1932, fig. 6) actually represents that tooth, its structure is very much simplified as compared with that observable in the same teeth from Węże. All this leads to the conclusion, that the form recorded from Gundersheim and Węże is distinctly different from the Rumanian form and must be regarded as a different species, *Ungaromys weileri* (HELLER). The present writer suggests its retention within the genus *Ungaromys* KORMOS in view of the lack of evidence barring its recognition as an earlier link in the same evolutionary stock. The above proposed succession of forms within the genus *Ungaromys* KORMOS coincides with the stratigraphic position of the faunas from which they have been recovered: *U. weileri* (HELLER), a more primitive species, occurs in Upper Pliocene faunas, while *U. nanus* KORMOS, a much more specialised form, is recorded from the younger faunas of the old Pleistocene. Besides Episcopia it probably also occurs at Kamyk in Poland (K. KOWALSKI, 1960b).

The genus *Ungaromys* KORMOS is part of a group of primitive genera of *Microtidae* which seem to have reached their apical development at the very beginning of that family's history, prior to the development of the genera *Dolomys* NEHRING and *Mimomys* F. MAJOR. *Promimomys* KRETZOI and *Stachomys* n. g. belong to that group too, while among recent forms it is represented by the relict genera *Prometheomys* SATUNIN and *Ellobius* FISCHER.

Genus *Stachomys* n. g.

Stachomys trilobodon n. sp.

(Pl. LX; text-fig. 3—4)

Holotypus: a damaged mandible with M_1—M_3
Stratum typicum: Upper Pliocene
Locus typicus: Węże, Poland
Derivatio nominis: *Stachomys* — in honour of Jan STACH, director of the Cracov Branch of the Polish Academy's Institute of Zoology, who started the palaeontological description of the Węże fauna and has completed that of the carnivores; *trilobodon* — with a three-lobed anterior loop in M_1.

Material: one mandible with M_1—M_3 (holotype), 7 mandibles with M_1—M_2, 9 mandibles with M_1, one fragment of the upper jaw with M^1—M^3, four other fragments of the upper jaw, numerous detached molars, among them 65 first lower molars and 46 third upper molars.

Description. The incisive passing beneath the second root of M_2. The enamel of the molars fairly thick but proportionately much thinner than that in *Ungaromys* KORMOS. Early formed roots. Lack of cement in re-entrant folds. Enamel fields without tendency to become confluent.

M_1 displaying a most characteristic structure. It is provided with a posterior loop, four isolated enamel triangles and an anterior loop shaped like a clover leaf, i. e. consisting of 3 lobes, of which one is directed to the front, the other two laterally. Additional complications may occur and badly worn teeth may be reduced, as has been shown in the attached figures.

M_2 is with two shallow outer re-entrant folds and two deep inner ones, hence the surface of the tooth consists of the posterior

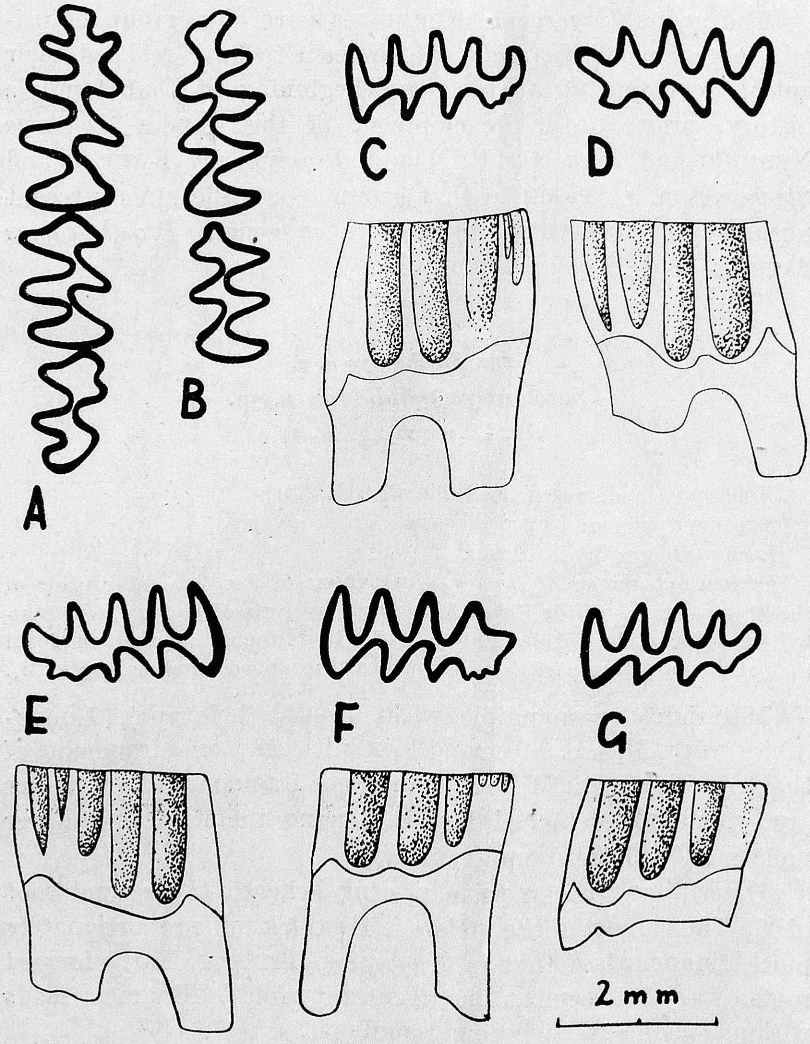

Fig. 3. *Stachomys trilobodon* n. g., n. sp. A: holotype, M_1—M_3; B: M_1—M_2; C—G: M_1 in different stages of wear.

and anterior loop and two median delimited triangles. An additional accessory shallow re-entrant fold may occur on the outer side of the anterior loop.

M_3 is very characteristic. It is provided with two inner and two outer re-entrant folds, the outer posterior and the inner anterior ones, however, are deeper than the others, thus dividing the whole tooth surface into two fields separated by a strong narrowing. Occasionally both the inner re-entrant folds may be deeper than the outer ones, but the division into two separate fields is always observable.

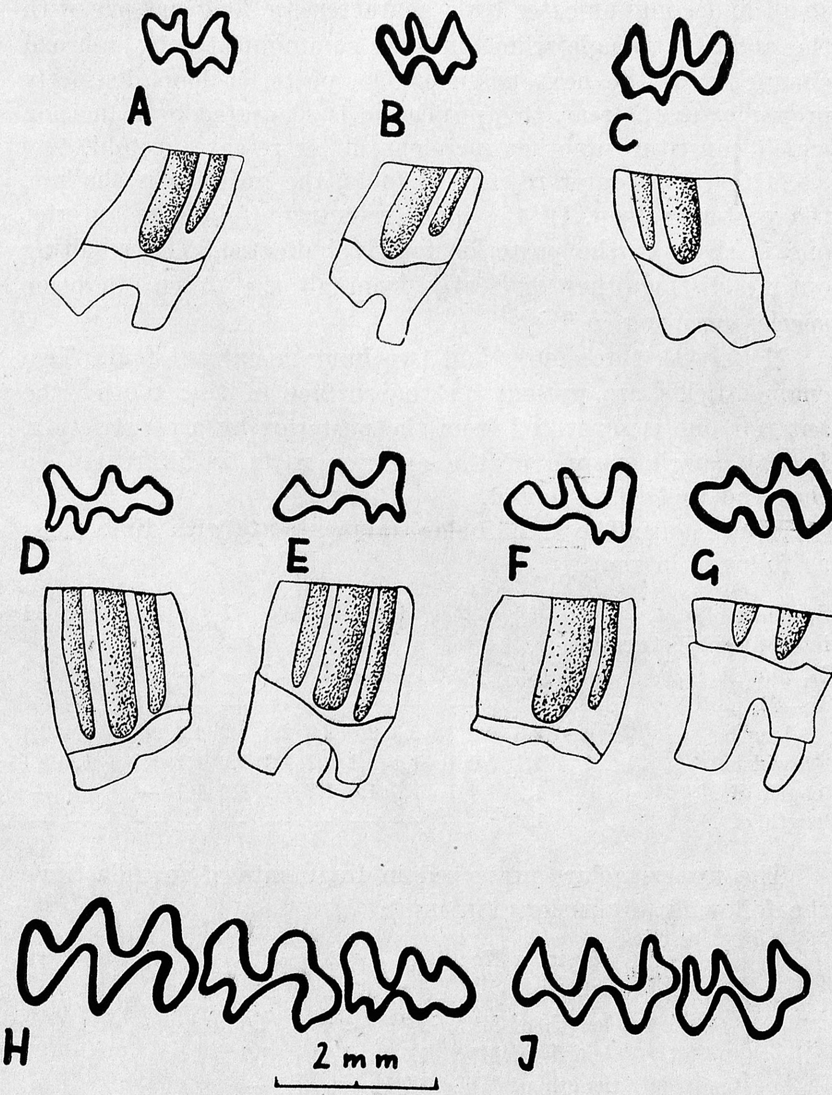

Fig. 4. *Stachomys trilobodon* n. g., n. sp. A—C: M_3; D—G: M^3; H: M^1—M^3; J: M_1—M_2.

Fragments of the upper jaw and detached maxillary molars may certainly be included into this species. All the upper molars are three-rooted. The surface of the enamel fields, particularly so in young individuals, is rather small.

M^1 consists of five enamel fields. The anterior loop is rather small and communicates by a characteristic long passage with the anterior triangle which in turn communicates by a broad channel with the next triangle. The posterior loop distinctly protrudes to the rear, this projection is separated by a incision which constitute another incipient, inner re-entrant fold.

M^2 has two outer re-entrant folds, the anterior is shallow, the posterior deep. Of the inner re-entrant folds the anterior one is shallow, the posterior faintly indicated. The resulting outline distinguishes it clearly from all the other Microtine species occuring in Węże.

M^3 is with three outer and two inner re-entrant folds. Two enamel fields are present on the surface of this tooth: the anterior one is separated from the posterior by a constriction. In one specimen one of the anterior roots is bifurcated so that the tooth is 4-rooted.

Dimensions. The mandibular fragments are with dimensions as follows (in mm):

Specimen No	1*	2	3	4	5	6	7	8	9	10	11
inner height between M_1 and M_2	±2,7	±2,6	—	—	2,8	2,7	—	—	2,5	2,6	2,8
M_1—M_3	5,3	—	—	—	—	—	—	—	6,3**	—	—
M_1 length	2,3	2,3	2,3	2,3	2,3	2,4	2,3	2,3	2,3	2,4	2,4
M_1 width	1,1	1,1	1,1	1,1	1,1	1,1	1,0	1,1	1,1	1,0	1,1
length of M_2	1,7	1,7	1,6	1,7	1,7	1,7	1,6	1,7	—	—	—
length of M_3	1,3	—	—	—	—	—	—	—	—	—	—

The upper molars preserved in fragments of maxilla have the following dimensions (in mm):

specimen No	1	2	3
M^1—M^3	5,7	—	—
length of M^1	2,3	2,0	2,0
length of M^2	1,7	1,7	1.7
length of M^3	1,7	—	—

* holotype

** alveolar length

The detached molar teeth have the following dimensions (in mm):

	number of measured specimens	minimum	mean	maximum
M_1 length	20	2,2	2,3	2,5
M_1 width	20	1,0	1,1	1,1
length of M_3	20	1,2	1,3	1,4
length of M^2	20	1,6	1,7	1,9
length of M^3	20	1,5	1,6	1,7

The assignment to this species of the detached specimens of M_2 and M^1 is questionable.

Systematic position. On the outline of the anterior loop of M_1 the here studied form may be readily distinguished from any other fossil or recent genus of *Microtidae*. Similarities to the genus *Ungaromys* KORMOS, occuring in older specimens of M_1, merely confirm their common appartenance to the primitive group of *Microtidae* including *Ungaromys* KORMOS, *Stachomys* n. g., *Promimomys* KRETZOI, *Prometheomys* SATUNIN and *Ellobius* FISCHER. From *Stachomys* n. g. the genus *Ungaromys* KORMOS differs in a tendency to confluency of enamel fields and in different structure of M_3. Among all genera of *Microtidae Prometheomys* SATUNIN comes closest to the here considered genus. Its recent forms now live in the Caucasus, while its fossil remains may be encountered in young Pleistocene strata of that territory only (N. K. VEREŠČAGIN, 1959). Thus e. g. the dentition of *Prometheomys schaposchnikovi* SATUNIN, the only species of that genus, discussed by M. A. C. HINTON (1926, p. 86, fig. 55) displays a strike resemblance to that of *Stachomys trilobodon* n. sp. Most likely *Stachomys* n. g. is the direct ancestor of *Prometheomys* SATUNIN, but differs in a number of primitive characters on which it is established into a separate genus. These differences consist in the presence of three roots in maxillary molars, lack of reduction in the third lower and upper molars (characteristic of the recent genus), more complex structure of the anterior loop in the 1st lower molar — even though this type of structure is encountered in extremely young individuals of the recent species (S. I. OGNEV, 1948, p. 552, fig. 257).

Genus *Dolomys* Nehring 1898

Dolomys hungaricus Kormos 1934

(Pls. LXI, LXII, figs. 3, LXIII, fig. 2; text-figs. 5—7)

1914. *Dolomys Milleri* Nhrg.; L. Méhely, Fibrinae..., p. 183, pl. II, fig. 9.
?1931. *Dolomys Milleri* Nhrg.; T. Kormos, Über eine..., p. 131—132, fig. 5, c.
1934. *Dolomys hungaricus* n. sp.; T. Kormos, Neue Insectenfresser..., 315—317, fig. 46.
1955. *Dolomys (Dinaromys) hungaricus*; M. Kretzoi, *Dolomys*..., p. 348, 349, 351.
1955. *Pliomys* (?) *hungaricus* (Kormos); M. Kretzoi, *Promimomys*..., p. 90.
1956. *Dolomys* (?) *hungaricus* Korm.; M. Kretzoi, Die altpleistozänen..., p. 169, 170, 262.
1959. *Propliomys* n. g. *hungaricus* (Kormos); M. Kretzoi, Insectivoren..., 243.

Material. 32 damaged mandibles with M_1—M_3, M_1—M_2 or M_1, 57 detached M_1. Mandible with M_1—M_2, also a fragmentary skull belonging to it with M^1—M^3 sin. et M^1—M^2 dex., 3 other fragments of the skull with M^2—M^3 and numerous detached molars probably also belong here.

Description. Mandibular incisor terminates below the dental foramen. It passes under the posterior root of M_2. Molars are with early developed roots. Lack of cement in re-entrant folds.

M_1 consists of the posterior loop, 5 enamel triangles (of which the two posterior ones are broadly confluent) and of a short obliquely placed anterior loop, on the inner side occasionally provided with an accessory re-entrant fold.

M_2 has two inner and two outer re-entrant folds, the latter being considerably more shallow. The median triangles are broadly confluent but distinctly alternating.

M_3 resembles M_2 but it is smaller and more conspicuously assymetric.

One half of a mandible and a cranial fragment with M^1—M^3 sin. and M^1—M^2 dex. have been found lying side by side (pl. LXII, fig. 3, text-fig. 6, A). This position and analogies of dimensions and individual age strongly suggest that these two species belonged to one individual. The M^1 here consists of the anterior loop and 4 enamel triangles. The anterior margin of the triangles is convex, the posterior one distinctly concave.

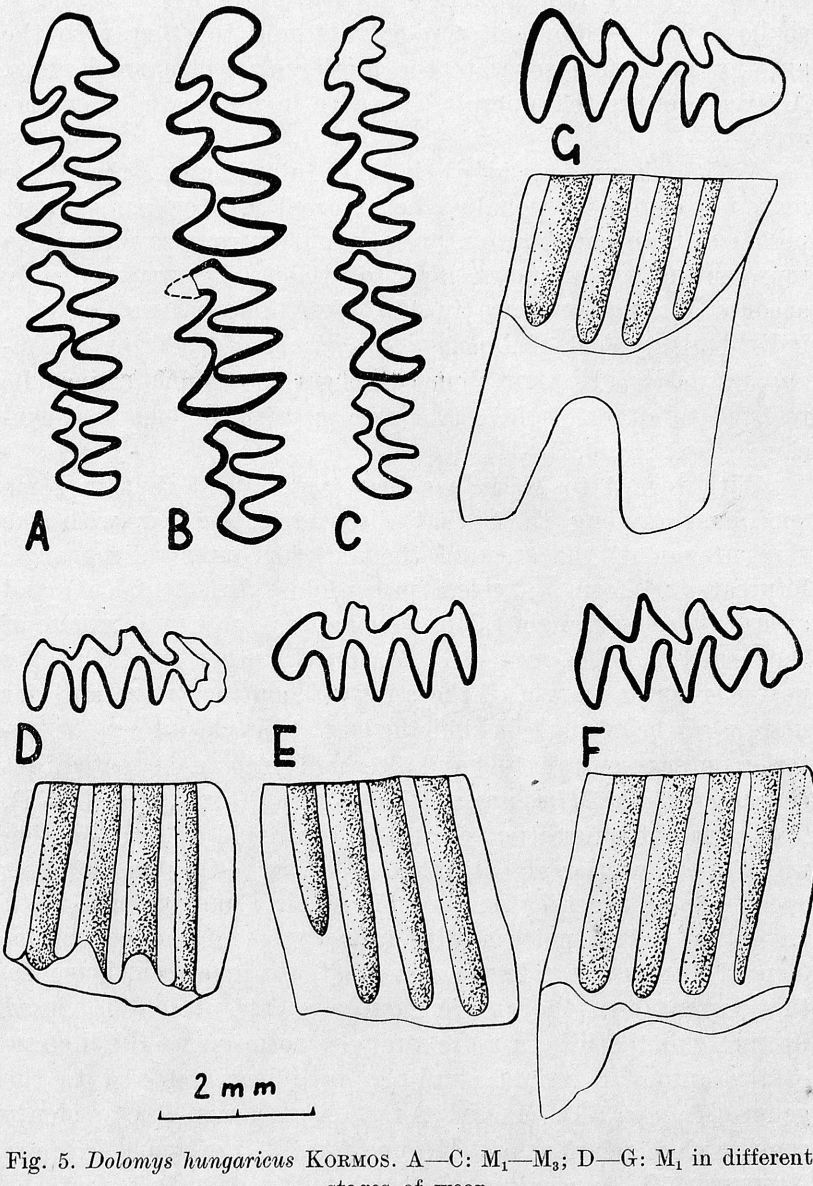

Fig. 5. *Dolomys hungaricus* KORMOS. A—C: M_1—M_3; D—G: M_1 in different stages of wear.

This likewise applies to M^2 which consists of 4 confluent enamel areas. The M^3 in this specimen has two re-entrant folds on the inner side and three on the outer side, the posterior outer fold being very faintly indicated. The anterior outer fold is shallow. The median outer re-entrant fold together with the anterior inner fold separate the tooth into two enamel areas. A large islet stretches across the tooth in the posterior enamel area.

As has been mentioned in the Introduction, the Węże material cannot reasonably be referred to the same short period of time but is a mixture of remains from various strata representing an unknown lapse of time. This may possibly account for the presence in the Węże material not only of individuals typical of *Dolomys hungaricus* Kormos or of *Mimomys stehlini* Kormos, but of others too which cannot be referred to either of these two species (with analogous dimensions) (text-fig. 6, E—H).

With regard to M_1 is has been ascertained that in some specimens (among them that discovered together with the skull fragment) the apex of the anterior outer salient angle bifurcates to form a typical prism-fold („Prismenfalte") and accessory salient angle („Mimomyskante"), so characteristic of the dentition of *Mimomys* F. Major. In other specimens the posterior outer margin of the anterior loop meets the anterior margin of the triangle behind the loop, thus closing up the anterior outer re-entrant fold and altering it into an elongated islet characteristic of *Mimomys stehlini* Kormos (text-fig. 6, G—H). The terminal bifurcation of the salient angle and the closing up of the anterior re-entrant fold occurs either in different specimens or together in one individual. Some juvenile teeth have the surface pattern with all features of the genus *Dolomys* Nehring. In side view of this tooth it is seen, however, that lower down the anterior outer re-entrant fold is closed up: has this tooth been more strongly worn during the lifetime of the animal it would certainly have been referred to the genus *Mimomys* F. Major. As it is, the available evidence suggest close relationships of some form of the genus *Dolomys* Nehring (*D. hungaricus* Kormos) with some forms of the genus *Mimomys* F. Major (*M. stehlini* Kormos). The present writer feels inclined to believe that the genera *Dolomys* Nehring and *Mimomys* F. Major are two links of one evolutionary line. It should, however, be remembered that this

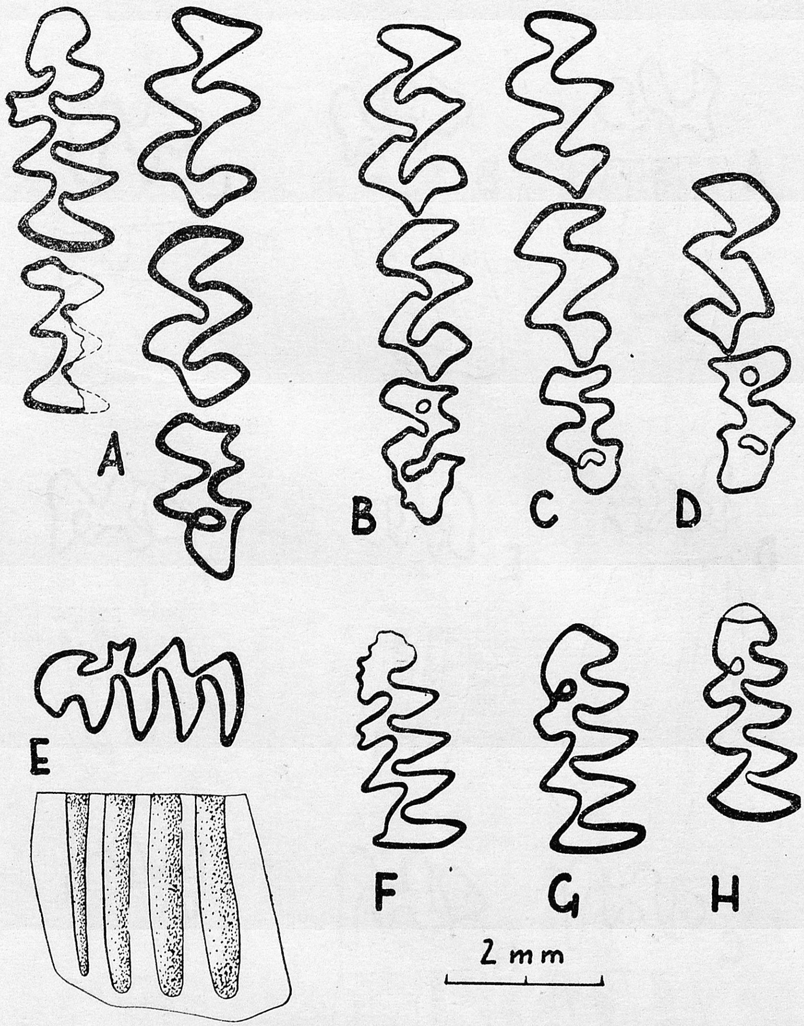

Fig. 6. *Dolomys hungaricus* KORMOS or *Mimomys* cf. *stehlini* KORMOS (intermediate specimens). A: M_1—M_2 and M^1—M^3 of one specimen; B—C: M^1—M^3; D: M^2—M^3; E—H: M_1.

may be applicable to some of the forms of the two genera only: other forms of *Dolomys* NEHRING have persisted up to the present time, while other forms of *Mimomys* F. MAJOR may have developed independently. The two genera actually seem to be an assemblage of forms in a similar evolutionary stage, but not necessarily close related.

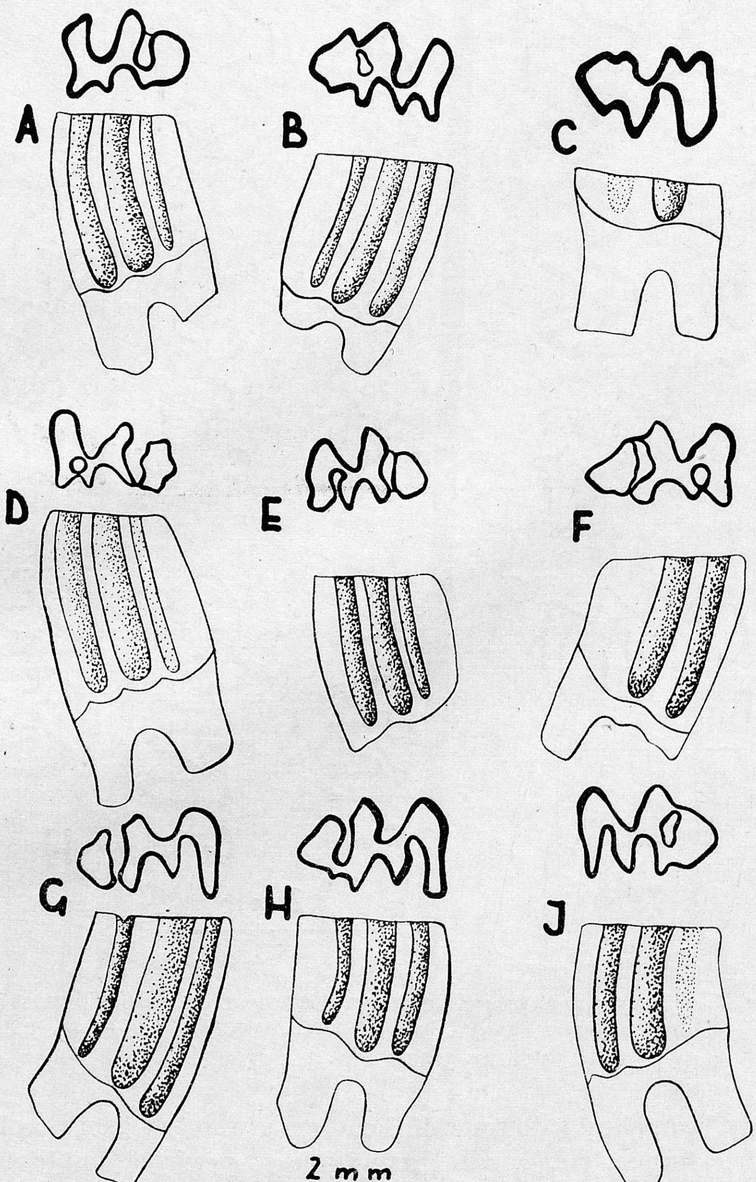

Fig. 7. *Dolomys hungaricus* KORMOS or *Mimomys* cf. *stehlini* KORMOS. Three types of M^3, each in different stages of wear.

Still greater classification difficulties are encountered in establishing the systematic position of maxillary teeth from the Węże material. The first and second maxillary molars are sufficiently uniform to bar their distinction. The available specimens of the third maxillary molar likewise contain several groups whose specific identification is not possible.

In one of these groups (text-fig. 7, A—C) M^3 has a shallow anterior enamel fold on the outer side, without an enamel islet in the anterior part of the tooth. The structure here is identical with that noted in the specimen collected together with the mandible and described here above. This type of structure is likewise displayed by M^3 in *D. hungaricus* KORMOS from Csarnota, supplied to the writer through the kindness of Dr. M. KRETZOI. The anterior outer re-entrant fold is here shallow, independently of individual age. The posterior inner fold is reduced by extensive transverse insulation. The teeth are usually three-rooted, sometimes two-rooted.

In another group of Węże M^3 specimens (text-fig. 7, G—J) the anterior inner re-entrant fold is invariably deep, independently of individual age, and it neither grows shallower not is closed up by insulation. Posteriorly the tooth resembles the already described specimens. The teeth are mostly three-rooted, only occasionally two-rooted.

Finally, in the third group of specimens of M^3 (text-fig. 7, D—F) the anterior outer re-entrant fold is deep in young teeth, but is subsequently reduced by insulation and so becomes more shallow in older individuals. These teeth have usually two enamel islets.

At the present moment the writer cannot take up a definite standpoint regarding the classification of these teeth nor the evolution of that Microtine group from Węże. In order adequately to clarify these problems it is necessary to examine material from different beds of the Węże breccia (which is still feasible), to collect more numerous specimens of lower and upper jaws preserved together, and finally to study materials from other localities where the various forms or evolutionary stages may occur independently.

Dimensions. The above mentioned mandible and jaws are with the following dimensions: length of maxillary tooth-row

6,7 mm, length of M^1 2,5 mm, length of M^2 2,3 mm, length of M^3 1,8 mm, alveolar length of mandibular tooth-row 7,0 mm, length of M_1 3,0 mm, breadth of M_1 1,5 mm, length of M_2 1,9 mm.

The more satisfactorily preserved mandibles have the following dimensions (in mm):

specimen No	1	2	3	4	5	6	7	8	9	10
inner height between M_1 and M_2	±3,2	±3,3	3,2	3,1	3,1	3,4	—	3,0	3,2	±3,1
thickness there	2,9	2,9	2,9	2,6	2,6	—	2,6	2,8	2,7	2,6
M_1—M_3	6,3	6,2	6,6	6,0	5,9	5,9	5,7	5,6	5,9	—
M_1 length	2,9	2,8	3,1	2,7	2,8	2,7	2,7	2,7	2,9	—
M_1 width	1,3	1,3	1,3	1,1	1,3	1,3	1,1	1,3	1,1	1,3
length of M_2	1,8	1,8	1,9	1,7	1,6	1,7	1,7	1,7	1,6	1,8
length of M_3	1,6	1,7	1,5	1,4	1,3	1,5	1,3	1,5	1,3	1,3

specimen No	11	12	13	14	15	16	17	18	19	20
inner height between M_1 and M_2	3,2	3,2	3,1	3,2	—	3,3	—	3,2	—	3,1
thickness there	2,7	2,8	3,0	2,8	—	2,9	—	2,8	—	2,5
M_1—M_3	—	—	—	—	—	—	—	—	—	—
M_1 length	2,6	2,7	3,2	2,7	2,7	2,7	2,9	2,6	2,8	2,8
M_1 width	1,2	1,2	1,3	1,2	1,2	1,2	1,2	1,2	1,2	1,3
length of M_2	1,7	1,7	1,9	1,7	1,7	1,6	1,7	1,7	1,7	1,8
length of M_3	—	—	—	—	—	—	—	—	—	—

Systematic position. The main part of the discussion on systematics has been included in the description of the species since it could not very well be treated apart. It should still be mentioned that some of the Węże specimens are identical with those of *D. hungaricus* Kormos from Csarnota, in the Hungarian material the presence of an accessory re-entrant fold on the anterior loop of M_1 seems to be more common though not always observable. First known specimen of *D. hungaricus* Kormos was originally described by L. Méhely (1914) as a youthful individual of *D. milleri* (Nehring), later (1934) it was correctly differentiated by T. Kormos. Thus far, *D. hungaricus* Kormos has been recorded from the just mentioned Hungarian site only. Another species of that genus, i. e. *Dolomys milleri* (Nehring), displays considerable differences in dental structure; it occurs in Csarnota 2 together with *D. hungaricus* KORMOS and in other localities. A revision of the genus *Dolomys* NEHRING would evidently be recommendable, however, befor this is effected, it would seem more convenient to retain its generic unity than to introduce continuous amendments without knowledge of the complete material. E. g. four successive generic names: *Dolomys* NEHRING, *Pliomys* MÉHELY, *Dinaromys* KRETZOI and *Propliomys* KRETZOI have been used by M. KREZTOI to denote *Dolomys hungaricus* KORMOS in four of his papers published between 1955 and 1959.

Genus *Mimomys* F. MAJOR

Mimomys cf. *stehlini* KORMOS 1931

[Pl. LXII, figs. 1—2; text-fig. 8]

Material. 19 damaged mandibles with M_1, partly also with M_2—M_3, 32 detached first lower molars. A fragment of the skull with upper molars and numerous detached molars (M_2—M_3 and M^1—M^3) most probably also belong here. They cannot, however, with certainty be distinguished from the just described .species.

Description. Mandibular incisor passes under the posterior root of M_2. The roots of the molars develop early. Cement is lacking in the re-entrant folds.

M_1 has a posterior loop, three closed up triangles and a high anterior loop. An inner re-entrant fold is always present in the anterior loop. Two accessory salient angles separated by a small re-entrant fold occur on the outside („Mimomyskante" and „Prismenfalte"). The islet is a constant element, it is large, oval-shaped and stretches along the longitudinal axis of the tooth.

M_2 and M_3 resemble each other; they are conspicuously assymetric and have confluent, though still distinctly alternating triangles.

Specimens of maxillary dentition, possible referable to

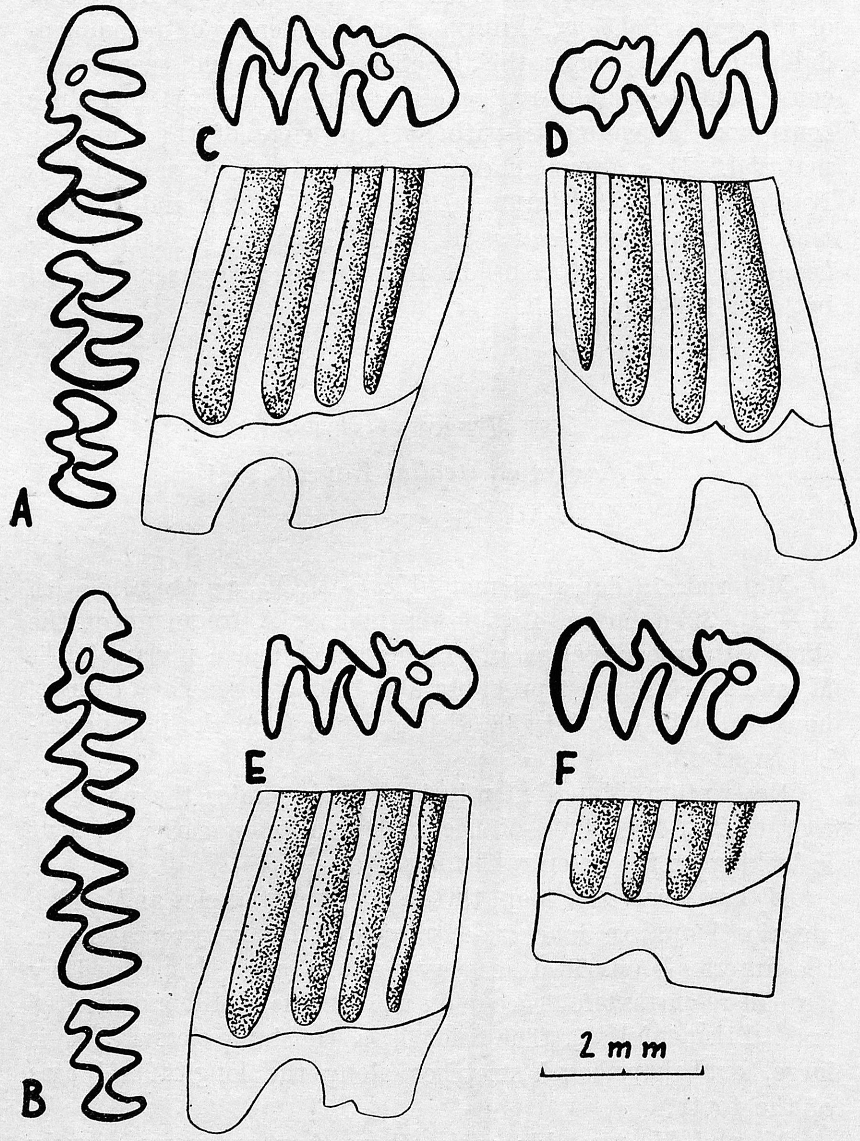

Fig. 8. *Mimomys* cf. *stehlini* Kormos. A—B: M_1—M_3; C—F: M_1 in different stages of wear.

M. cf. *stehlini* KORMOS, have been considered in the description of *D. hungaricus* KORMOS.

Dimensions. The dimensions of more satisfactorily preserved mandibles are as follows (in mm):

Specimen No	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
inner height between M_1 and M_2	—	—	3,2	—	3,5	—	3,3	3,3	3,3	—	—	3,7	3,7	3,3	—	—	—
thickness there	2,9	2,8	2,8	—	3,0	—	2,9	2,8	3,0	3,0	—	2,9	3,0	2,8	—	—	—
M_1—M_3	6,2	—	6,0	6,5	—	5,9	—	6,2	—	—	—	—	—	—	—	—	—
M_1 length	2,9	2,9	2,8	3,0	2,9	2,8	3,0	2,9	2,9	3,0	2,7	2,8	2,9	2,9	3,1	2,9	3,0
M_1 width	1,2	1,3	1,3	1,3	1,3	1,2	1,3	1,3	1,3	1,4	1,3	1,3	1,3	1,3	1,3	1,3	1,3
length of M_2	1,8	1,7	1,8	1,9	1,7	1,7	2,0	1,8	1,8	1,9	1,7	—	—	—	1,7	1,9	1,9
length of M_3	1,5	—	1,4	1,6	—	1,5	—	1,6	—	—	—	—	—	—	—	—	—

Systematic position. In outside appearance and in dimensions the here described remains agree with those from Rębielice Królewskie identified as *M*. cf. *stehlini* KORMOS (K. KOWALSKI, 1960a). This paper also contains some remarks on the systematic position of that species. The description of *D. hungaricus* KORMOS in the present paper states the writer's opinion regarding the relationship of that species with *M*. *stehlini* KORMOS.

Apart from a number of still unsolved problems it is now possible to assert that the upper Pliocene faunas of Europe contain the most primitive forms of the genus *Mimomys* F. MAJOR to which *M. stehlini* KORMOS and also *M. gracilis* (KRETZOI), described here below, are referred. They display relationships with the genus *Dolomys* NEHRING and a number of characteristic features in common, indicating their primitive character.

Mimomys gracilis (Kretzoi 1959)

[Pls. LXIII, fig. 1, LXIV; text-figs. 9—10]

1959. *Cseria gracilis* n. g. n. sp.; M Kretzoi, Insectivoren..., 242.

Material: 10 damaged mandibles with M_1—M_3, 40 mandibles with M_1—M_2, 20 mandibles with M_1, 190 detached M_1. A fragment of skull with the palate and M^1—M^3 sin., 2 fragments

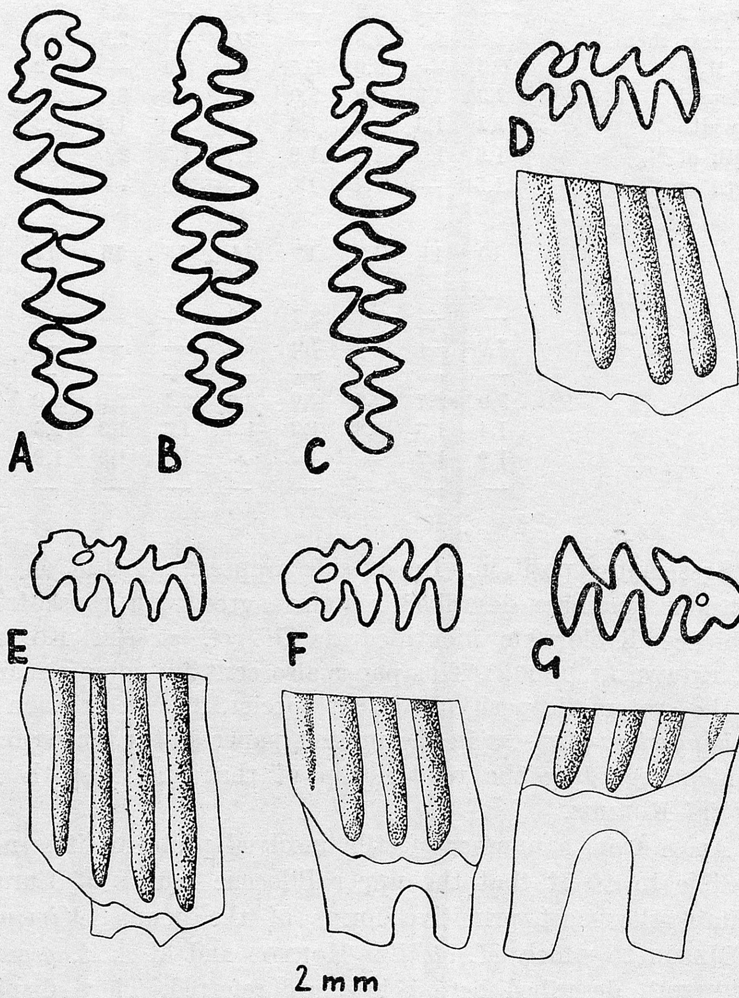

Fig. 9. *Mimomys gracilis* (Kretzoi). A—C: M_1—M_3; D—G: M_1 in different stages of wear.

of the upper jaw with M^2—M^3 and numerous detached M^3 also probably may be here referred.

Description. The incisor is short, it passes under the posterior root of M_2 and terminates beneath the foramen dentale. The roots of molars develop early. Cement is lacking in reentrant folds.

M_1 has a posterior loop, three enamel triangles, of which the two posterior ones are broadly confluent, and a high anterior loop. A distinct fold occurs on the inner side of the anterior loop, while a prism-fold and an accessory salient angle („Prismenfalte“ and „Mimomyskante“) are present on the outer side. The islet is a constant element, it is large and stretches along the long axis of the tooth.

M_2 has confluent enamel areas and moderately conspicuous assymetry. M_3 is similar but narrower and with strongly confuent triangles. The maxillary fragments which may, with great probability, be here assigned, indicate that M^1 and M^2 are invariably 3-rooted, while M^3 is two or three-rooted. M^1 has five enamel fields, the second and third triangle (counted from the anterior end) being broadly confluent. M^2 has four

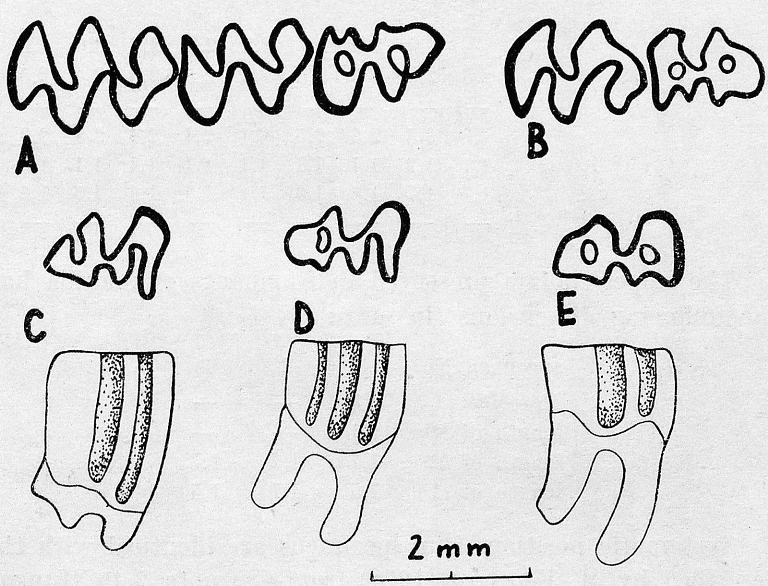

Fig. 10. *Mimomys gracilis* (KRETZOI). A: M^1—M^3; B: M^2—M^3; C—E: M^3.

enamel areas. M^3 is with two inner re-entrant folds: the anterior one is deep while the posterior one is reduced by insulation. On the outer side the anterior re-entrant fold is shallow and subject to reduction by insulation, the median is deep, the posterior faintly indicated. Hence the surface of the tooth consists of two enamel areas separated by a constriction; large, oval-shaped enamel islets, transversal to the tooth axis, occur in both these enamel areas.

Dimensions of the better preserved mandibles are as follows (in mm):

Specimen No.	1*)	2	3	4	5	6	7	8	9	10
inner height between M_1 and M_2	3,0	2,8	2,2	2,7	3,0	2,7	3,0	2,9	2,5	—
thickness there	2,5	2,5	2,3	2,2	2,6	—	2,5	2,4	2,5	2,5
M_1—M_3	5,1	5,6	4,9	5,3	5,3	5,2	5,3	5,3	5,3	—
M_1 length	2,3	2,5	2,3	2,5	2,4	2,2	2,3	2,3	2,5	2,4
M_1 width	1,1	1,1	1,1	1,1	1,1	1,1	1,1	1,1	1,1	1,1
length of M_2	1,5	1,7	1,5	1,5	1,6	1,5	1,5	1,5	1,7	1,5
length of M_3	1,3	1,5	1,3	1,3	1,3	1,3	1,2	1,3	1,3	—
	11	12	13	14	15	16	17	18	19	20
	—	3,0	2,9	2,7	2,7	2,7	2,7	3,0	2,6	2,7
	2,3	2,6	2,5	2,5	2,3	2,5	2,5	2,4	2,5	2,4
	—	—	—	—	—	—	—	—	—	—
	2,3	2,3	2,5	2,5	2,1	2,4	2,4	2,3	2,3	2,5
	1,1	1,2	1,1	1,1	1,1	1,1	1,1	1,1	1,0	1,1
	1,7	1,7	1,5	1,6	1,4	1,5	1,6	1,5	1,5	1,5
	—	—	—	—	—	—	—	—	—	—

The upper molars preserved in fragments of maxilla have the following dimensions (in mm):

specimen No	1	2	3
M^1—M^3	5,3	—	—
length of M^1	2,1	—	—
length of M^2	1,7	1,7	1,7
length of M^3	1,5	1,7	1,5

Systematic position. Our specimens are identical with that described by M. Kretzoi (1958) from Csarnota 2 in Hungary

*) holotype

as *Cseria gracilis* Kretzoi and may reasonably be referred to the genus *Mimomys* F. Major. Differences of size distinguish them readily from the other species of that genus found at Węże and described here as *M.* cf. *stehlini* Kormos, even though the two forms display a number of characters in common and are both very primitive. Within the genus *Mimomys* F. Major very few species only are with dimensions equally small as those in *M. gracilis* (Kretzoi). *M. dehmi* Brunner has equally small dimensions but has M_1 and M_2 altogether differently shaped. The only known specimen of M_1 of *M. orientalis* Young is 2,8 mm long, this species represents an evolutionary stage similar to that of *M. gracilis* (Kretzoi) and *M. stehlini* Kormos. M. *franconicus* Heller is known on one specimen of M_1 only which is 2,5 mm long. It must have belong to an extremely old individual, hence it is difficult to establish its correct systematic position. It may perhaps represent a senile individual belonging to a species approaching *M. gracilis* (Kretzoi), though the assymetry of the enamel triangles is here better indicated than in the Węże specimen.

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STRESZCZENIE

We wsi Węże (51°06'N, 18°48'O) w pobliżu Działoszyna, w północnej części Wyżyny Krakowsko-Wieluńskiej, znalazł J. Samsonowicz (1934) brekcję kostną wypełniającą zagłębienie krasowe. Powstała ona prawdopodobnie jako osad jaskini o pionowym otworze, w kształcie studni, do której wpadały zarówno drobne, jak i duże zwierzęta. Osad uległ spojeniu kalcytem, tak że szczątki zwierzęce trzeba było wypreparowywać przy pomocy kwasu octowego.

Opracowanie paleontologiczne brekcji rozpoczęte zostało przez prof. Jana Stacha w Oddziele Krakowskim Instytutu

Zoologicznego Polskiej Akademii Nauk. Jan STACH (1951, 1953, 1954, 1957, 1959) opracował *Carnivora*, M. MŁYNARSKI (1953, 1955, 1956a, 1956b) faunę gadów, T. CZYŻEWSKA (1958, 1959) szczątki nosorożca i jeleniowatych, A. SULIMSKI (1959). *Insectivora*. Z gryzoni opracowano dotąd szczątki *Trilophomys pyrenaicus* (DÉPERET) (S. SCHAUB & K. KOWALSKI, 1958) i ślepca (K. KOWALSKI, 1960c).

Reptilia

Testudines

Testudo szalaii MŁYNARSKI
Testudo antiqua noviciensis DEPÉRET
Geoemyda eureia (WEGNER)
Clemmys sp.
Emys wermuthi MŁYNARSKI

Squamata

Lacerta sp.
Ophisaurus pannonicus KORMOS

Mammalia

Insectivora

Erinaceus samsonowiczi SULIMSKI
Sorex runtonensis HINTON
Sorex araneus L.
Sorex cf. *minutus* L.
Sorex sp.
Blarinoides mariae SULIMSKI
Neomys soriculoides SULIMSKI
Beremendia fissidens (PETÉNYI)
Petenyia hungarica KORMOS
Crocidura sp.
Suncus pannonicus (KORMOS)
Suncus zelceus SULIMSKI
Desmana nehringi KORMOS
? *Galemys* sp.
Talpa minor FREUDENBERG
Talpa fossilis PETÉNYI

Rodentia

Trilophomys pyrenaicus (Depéret)
Prospalax priscus (Nehring)

Carnivora

Nyctereutes sp.
Agriotherium intermedium Stach
Ursus wenzensis Stach
Mustela pliocaenica Stach
Mustela plioerminea Stach
Martes wenzensis Stach
Actomeles pliocaenicus Stach

Perissodactyla

Dicerorhinus cf. *megarhinus* (Christol)

Artiodactyla

Cervus (Rusa) sp.

Opracowana dotychczas część fauny z Wężów wskazuje na jej wiek górno-plioceński.

Szczątki *Cricetidae* i *Microtidae* opisane w niniejszej pracy zebrane zostały przez Oddział Krakowski Instytutu Zoologicznego Polskiej Akademii Nauk i tam też są przechowywane. Są to fragmenty czaszek, żuchwy i luźne zęby; pochodzą albo ze zrzutek sów, albo ze zwierząt, które wpadły do jaskini, ale których resztki uległy rozwleczeniu i rozproszeniu, tak że całych szkieletów nie znaleziono. Wśród szczątków gryzoni wypreparowanych przez nas z brekcji z Wężów *Microtidae* i *Cricetidae* stanowią łącznie około 90%. W całym zbadanym materiale brak *Cricetinae*. Reprezentowane są jedynie *Microtidae* i dwa gatunki *Cricetidae* wykazujące podobną do nich budowę zębów, a zaliczane na razie do „*Cricetidae incertae sedis*". Skład gatunkowy opracowanego materiału przedstawia się następująco (cyfry wskazują minimalną ilość osobników):

Cricetidae incertae sedis

Trilophomys pyrenaicus (Depéret) 4
Microtodon longidens n. sp. 27

Microtidae

Ungaromys weileri (Heller) 6
Stachomys trilobodon n. sp. 40
Dolomys hungaricus Kormos 45
Mimomys cf. *stehlini* Kormos 26
Mimomys gracilis (Kretzoi) 130

Fauna *Microtidae* i *Cricetidae* z Wężów jest bardzo swoista w swym składzie i wykazuje tylko częściowe analogie ze znanymi dotąd faunami. Najbliższe jej są: w Polsce Rębielice Królewskie i Podlesice, na Węgrzech Csarnota 2, w Czechosłowacji Hajnačka, w Niemczech Gundersheim i Wölfersheim. Fauna z Wężów wskazuje na krajobraz bezleśny, prawdopodobnie stepowy.

Trilophomys pyrenaicus (Depéret) znany był dotąd jedynie z Rousillon we Francji, poza tym występuje również prawdopodobnie w Wölfersheim. *Microtodon longidens* n. sp. należy do rodzaju szeroko rozmieszczonego w górnym pliocenie, choć opisywanego pod różnymi nazwami. Z górnego pliocenu Europy znano go pod nazwą *Baranomys* Kormos (z gatunkiem *B. loczyi* [Kormos]); z Mongolii, z warstw, których wiek określano (nie wiadomo czy słusznie) na pont, znany jest jako gatunek *Microtodon atavus* (Schlosser). Z fauny określanej jako Hemphillian Stanów Zjednoczonych A. P. opisany został *Prosomys mimus* Shotwell. Duży materiał z Wężów pozwala poznać lepiej zmienność osobniczą w obrębie tego rodzaju i wskazuje, że wszystkie wymienione formy należą do jednego, szeroko rozmieszczonego rodzaju. Po raz pierwszy opisano tu budowę czaszki i zębów szczęki *Microtodon* Miller.

Ungaromys weileri (Heller) znany był dotąd z Gundersheim w Niemczech. Materiał z Wężów pozwolił wykazać, że dwa gatunki opisane przez F. Hellera (1936) z Gundersheim tj. *Ungaromys nanus* Kormos i *Germanomys weileri* Heller są synonimami, różnią się natomiast od bardziej rozwiniętej formy *Ungaromys nanus* Kormos z Rumunii.

Nowy rodzaj i gatunek *Stachomys trilobodon* n. sp. jest nieznaną dotąd, prymitywną formą *Microtidae* wykazującą najbliższe podobieństwo do żyjącego dziś na Kaukazie rodzaju *Prometheomys* Satunin.

Dolomys hungaricus KORMOS znana była dotąd z Csarnota 2 na Węgrzech. Niektóre osobniki znalezione w Wężach wykazują cechy przejściowe między rodzajami *Dolomys* NEHRING i *Mimomys* F. MAJOR, co wskazuje na bliski związek tych dwu rodzai. *Mimomys* cf. *stehlini* KORMOS jest formą bardzo bliską opisywanym dotąd pod różnymi nazwami gatunkom rodzaju *Mimomys* F. MAJOR z kilku stanowisk górnego pliocenu Europy (Val d'Arno inferiore, Gundersheim, Sète, Rębielice Królewskie). *Mimomys gracilis* (KRETZOI) reprezentuje to samo stadium rozwojowe co *M. stehlini* KORMOS, od której różni się tylko wyraźnie mniejszymi rozmiarami.

РЕЗЮМЕ

В деревне Венже (51°06′И, 18°48′0) вблизи Дялошина, в северной части Краковско-Велюньской возвышенности Самсонович (1934) нашол сборище костей, наполняющих крассовое углубление. Сборище это представляет вероятно осадок пещеры с отвесным отверстием, похожим на колодец, в которое попадали равно как мелкие, так и крупные животные. Со временем осадок этот подвергся скреплению кальцитом, так что останки животных надо было, чтобы их отделить, обрабатывать уксусной кислотой.

Палеонтологичаская обработка сборища начата была профессором И. Стахом в Краковском Отделении Зоологического Института Польской Академии Наук. И. Стах (1951, 1953, 1954, 1957 и 1959) обработал *Carnivora*, М. Млынарский (1953, 1955, 1956 и 1956) — фауну пресмыкающихся, Т. Чижевская (1958, 1959) — останки носорога и оленей, А. Сулимский (1959) — *Insectivora*. Из грызунов пока обработаны только останки *Trilophomys pyrenaicus* (DEPÉRET) (С. Шауб и К. Ковальский, 1958) и *Prospalax prisus* NEHRING (К. Ковальский, 1960).

В настоящее время, перечень фауны Венжов представляется следующим образом:

Reptilia

Testudines

Testudo szalaii MŁYNARSKI
Testudo antiqua noviciensis DEPÉRET

Geoemyda eureia (WEGNER)
Clemmys sp.
Emys wermuthi MŁYNARSKI

Squamata

Lacerta sp.
Ophisaurus pannonicus KORMOS

Mammalia

Insectivora

Erinaceus samsonowiczi SULIMSKI
Sorex runtonensis HINTON
Sorex araneus L.
Sorex cf. *minutus* L.
Sorex sp.
Blarinoides mariae SULIMSKI
Neomys soriculoides SULIMSKI
Beremendia fissidens (PETÉNYI)
Petenyia hungarica KORMOS
Crocidura sp.
Suncus pannonicus (KORMOS)
Suncus zelceus SULIMSKI
Desmana nehringi KORMOS
? *Galemys* sp.
Talpa minor FREUDENBERG
Talpa fossilis PETÉNYI

Rodentia

Trilophomys pyrenaicus (DEPÉRET)
Prospalax priscus (NEHRING)

Carnivora

Nyctereutes sp.
Agriotherium intermedium STACH
Ursus wenzensis STACH
Mustela pliocaenica STACH
Martes wenzensis STACH
Arctomeles pliocaenicus STACH

Perissodactyla

Dicerorhinus cf. *megarhinus* (Christol)

Artiodactyla

Cervus (Rusa) sp.

Обработанная до настоящего времени часть фауны Венжов указывает на ее происхождение в верхнем плиоцене.

Останки *Cricetidae* и *Microtidae*, описанные в настоящей работе, собраны были Отделением Краковского Зоологического Института Польской Академии Наук и там сохраняются. Материалы эти представляют фрагменты черепов, челюстей и одиночные зубы. Фрагменты эти находились вероятно в погадках сов или принадлежали животным, которые провалились в пещеру, однако целые скелеты не были найдены. Недостающие части вероятно затерялись или разложились. Среди останков грызунов препарированных нами из сборища костей, найденных в деревне Венже, *Microtidae* и *Cricetidae* составляют совместно 90%. Во всем исследованном материале недостает представителей из подсемейства *Cricetinae*. Представлены лишь *Microtidae* и два вида *Cricetidae*, обнаруживающие похожее строение зубов, а причисленные к „*Cricetidae incertae sedis*". Состав видов в обработанном материале из Венжов представляется следующим образом (цифры обозначают минимальное число особей):

Cricetidae incertae sedis

Trilophomys pyrenaicus (Depéret) 4
Microtodon longidens n. sp. 27

Microtidae

Ungaromys weileri (Heller) 6
Stachomys trilobodon n. sp. 40
Dolomys hungaricus Kormos 45
Mimomys cf. *stehlini* Kormos 26
Mimomys gracilis (Krejzoi) 130

Фауна *Microtidae* и *Cricetidae* деревни Венже очень своеобразна в своем составе и прявляет только частичное сходство с известными уже фаунами. В Польше найболее подобны ей Рембелице

Крулевске и Подлесице, в Венгрии, Чарнота 2, в Чехословакии, Гейначка, в Германии, Гундерсгейм и Вельферсгейм. Фауна Венжов показывает на безлесный характер местности, вероятно степной.

Microtodon longidens n. sp. принадлежит к роду, широко распространенному в верхнем плиоцене и описанному под различными названиями. С верхнего плиоцена Европы был он известен под названием *Baranomys* Kormos (с видом *M. loczyi* Kormos), из Монголии, из пласта, которого век определили (не известно насколько правильно) как понт, известен вид *Microtodon atavus* (Schlosser). Из фауны, причисленной к *Hemphillian* в Соединенных Штатах Северной Америки, описан был вид *Prosomys mimus* Shotwell. Большой материал из Венжов позволяет лучше ознакомиться с индивидуальной изменчивостью в пределах этого рода и показывает на то, что все вышеприведенные формы принадлежат к одному и томуже, широко размещенному роду. Впервые были тут описаны строение черепа и зубы верхной челюсти *Microtodon* Miller.

Ungaromys weileri (Heller) известен был доныне только из Гундерсгейма в Германии. Материал иа Венжов дал возможность установить, что два вида, описанные Ф. Геллером (1936) из Гундерсгейма — *Ungaromys nanus* Kormos и *Germanomys weileri* Heller, являются синонимами, отличаются однако от более развитой формы *Ungaromys nanus* Kormos из Румынии.

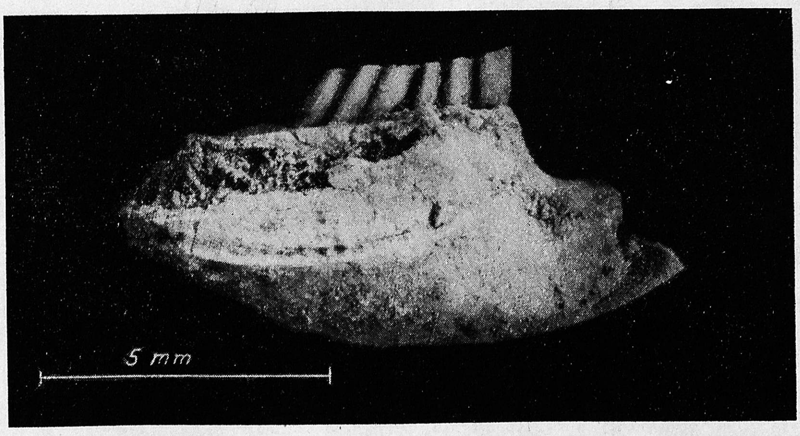
Новый род и вид *Stachomys trilobodon* n. sp. был доныне неизвестной, примитивной формой из семейства *Microtidae* обнаруживающий большое сходство с живущим в настоящее время на Кавказе родом *Prometheomys* Satunin.

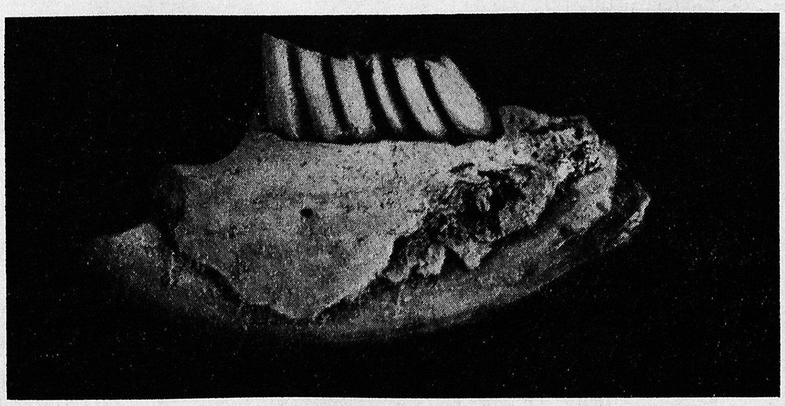
Dolomys hungaricus Kormos известен был только из Черноты 2 в Венгрии. Некоторые особи, найденные в Венжах обнаруживают переходные признаки между родами *Dolomys* Nehring и *Mimomys* F. Major. Это показывает на близкую генетическую связь вышеупомянутых родов. Вид *Mimomys* cf. *stehlini* Kormos очень близок первобытным формам рода *Mimomys* F. Major, которые до настоящего времени описаны были под разными названиями из нескольких местонахождений верхнего плиоцена Европы (Валь д), Арно инфериоре, Гундерсгейм, Сет, Ребмелице Крулевске). *Mimomys gracilis* (Kretzoi) представляет туже самую стадию развития, что и *M. stehlini* Kormos, от которого отличается меньшими размерами.

PLATES

Plate LVII

Trilophomys pyrenaicus (DEPÉRET), mandible



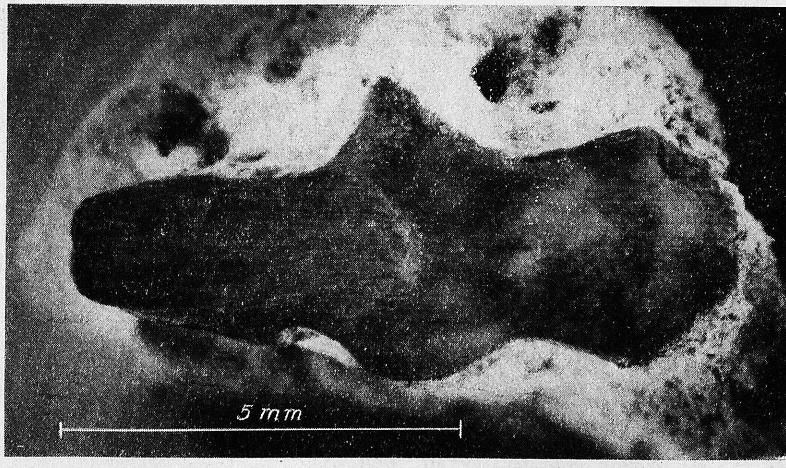


Phot. L. Sych
K. Kowalski

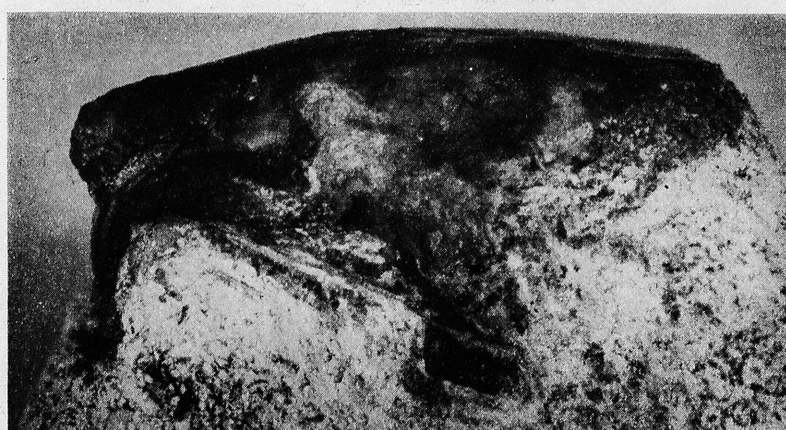
Plate LVIII

Microtodon longidens n. sp.

Fig. 1—2. skull.
Fig. 3. upper molars



1



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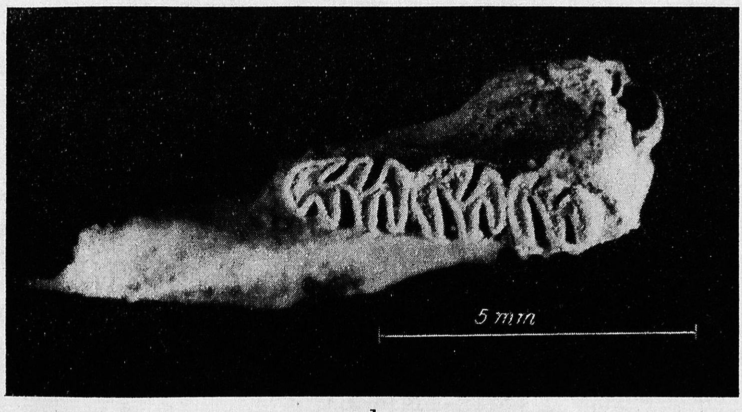
3

Phot. L. Sych

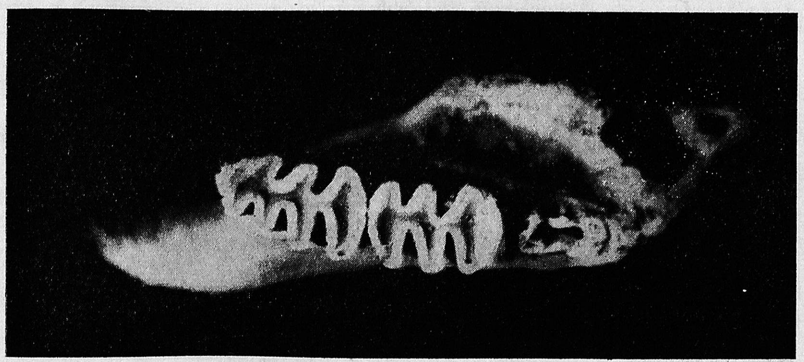
K. Kowalski

Plate LIX

Fig. 1. *Microtodon longidens* n. sp., mandible (holotype).
Fig. 2—3. *Ungaromys weileri* (Heller), mandible.



1



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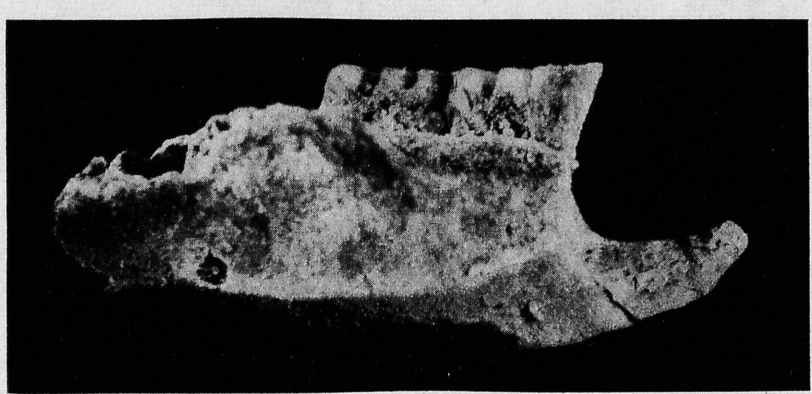

3

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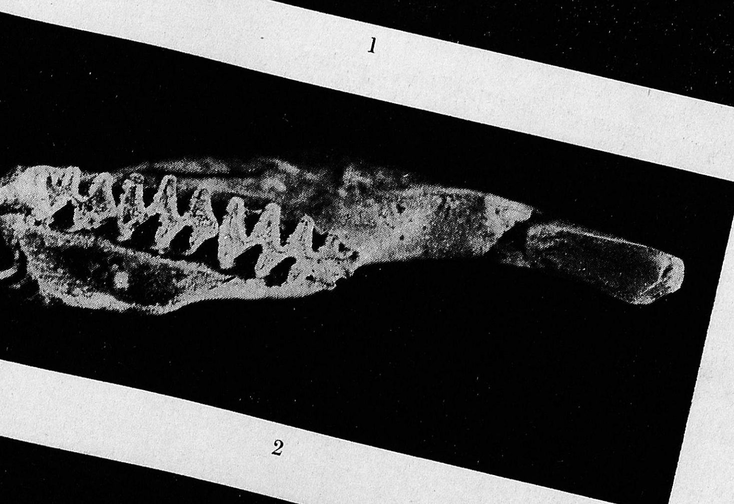
K. Kowalski

Plate LX

Stachomys trilobodon n. g., n. sp.

Fig. 1—2. Mandible (holotype).
Fig. 3. Upper molars.

1



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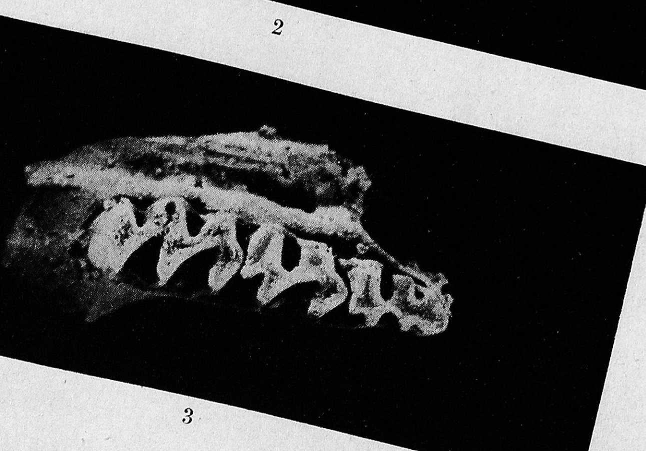

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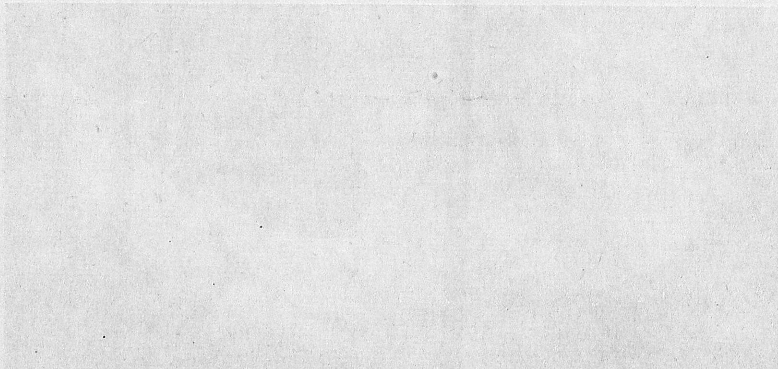
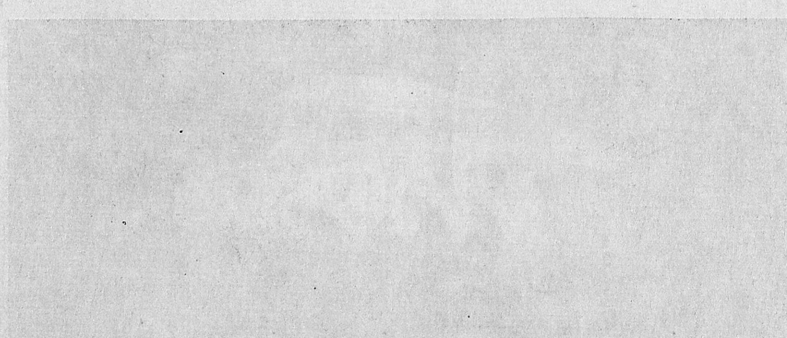
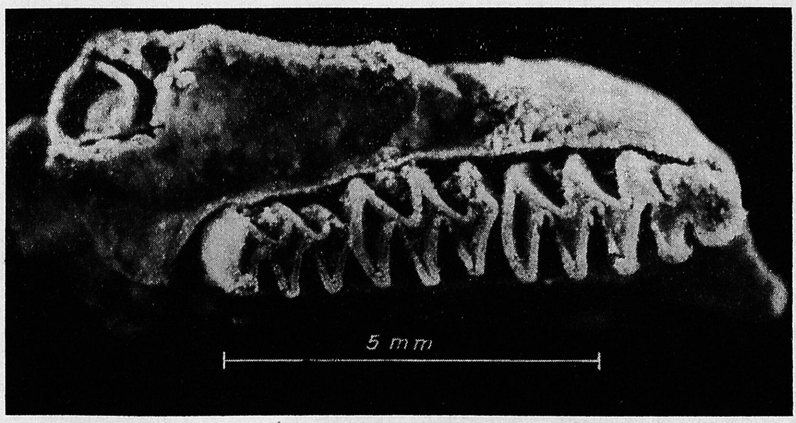
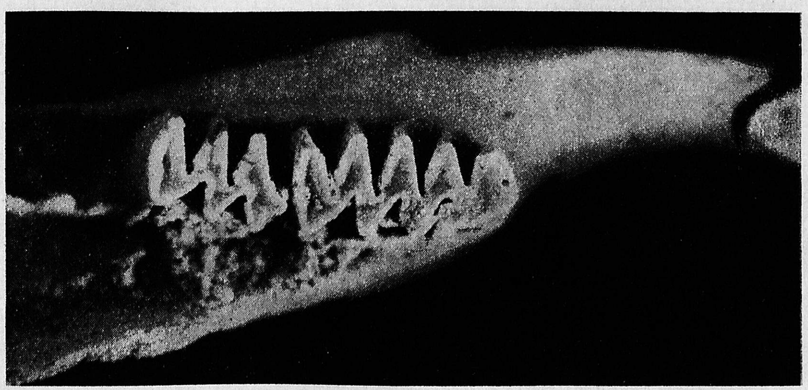


Plate LXI

Dolomys hungaricus KORMOS, lower molars.







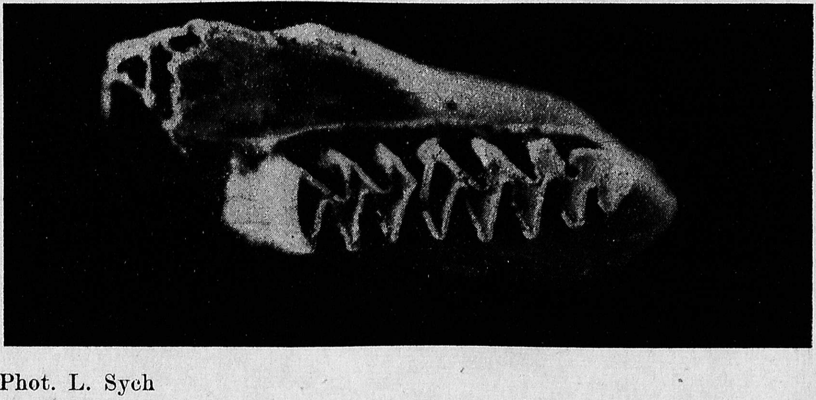


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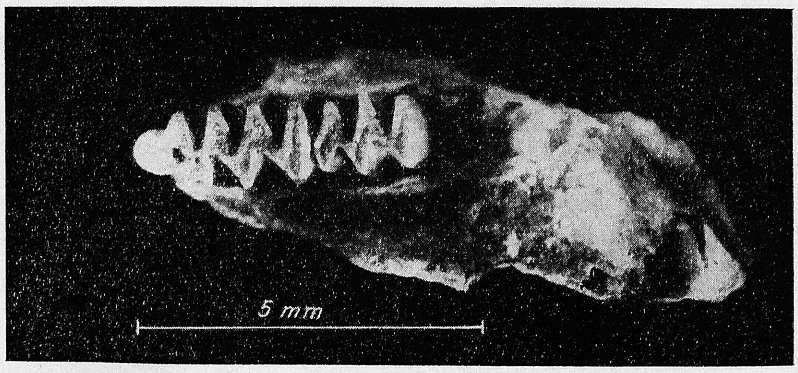
Plate LXII

Fig. 1—2. *Mimomys* cf. *stehlini* Kormos, lower molars (on fig. 1 M_1 is damaged).

Fig. 3. *Dolomys hungaricus* Kormos or *Mimomys* cf. *stehlini* Kormos; mandible and fragmentary skull of one specimen preserved together in the breccia.



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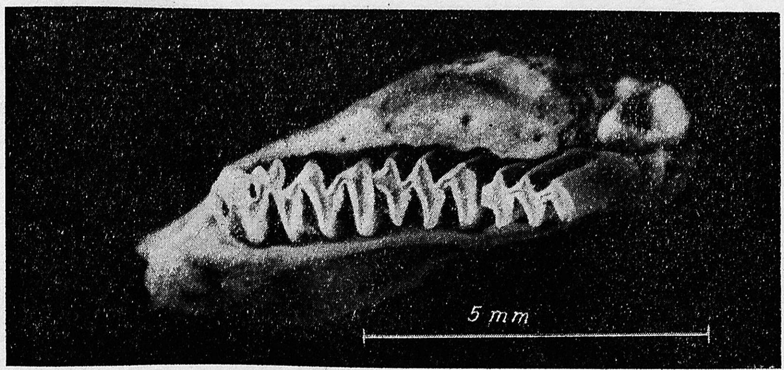

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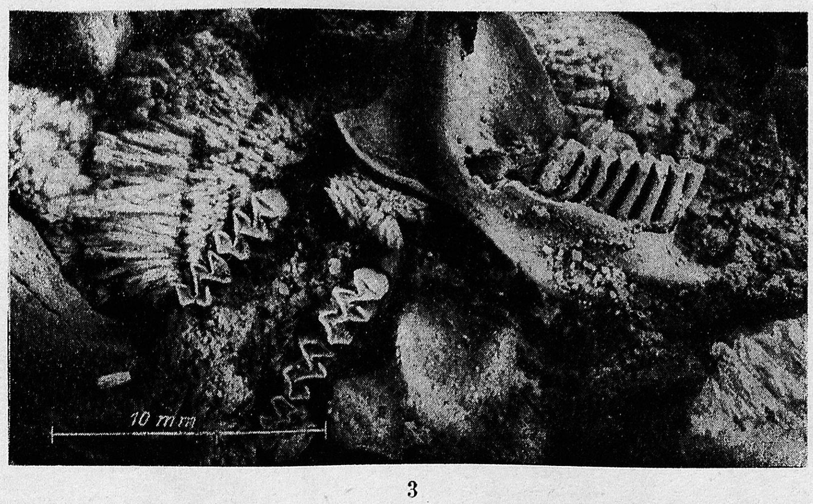

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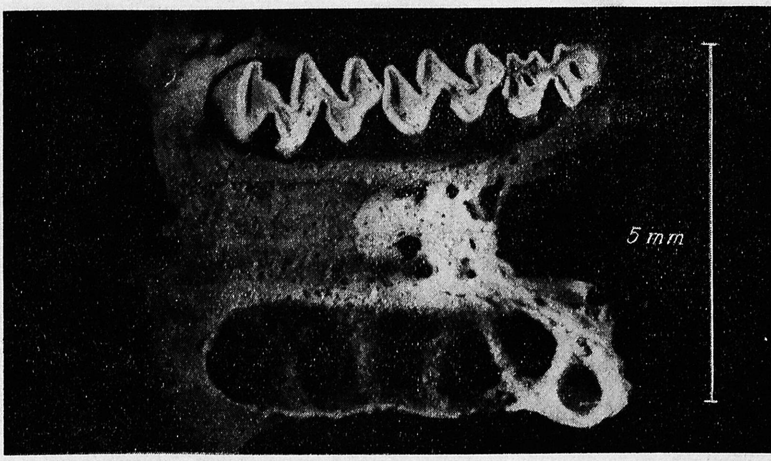
Plate LXIII

Fig. 1. *Mimomys gracilis* (Kretzoi), palate and upper molars.
Fig. 2. *Dolomys hungaricus* Kormos or *Mimomys* cf. *stehlini* Kormos, palate and upper molars.



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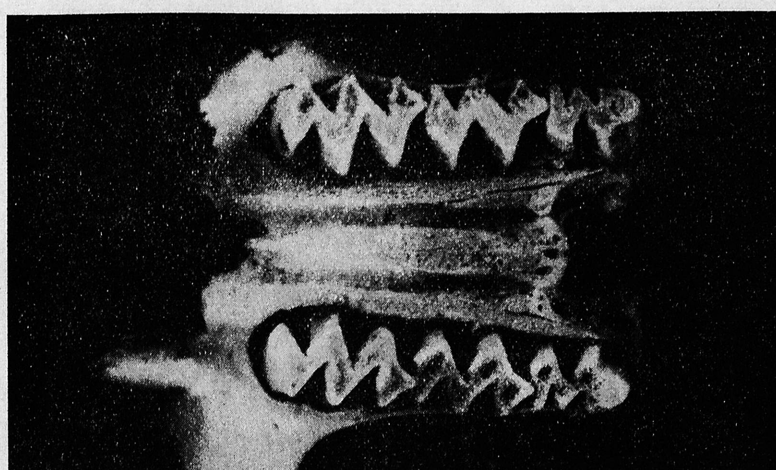

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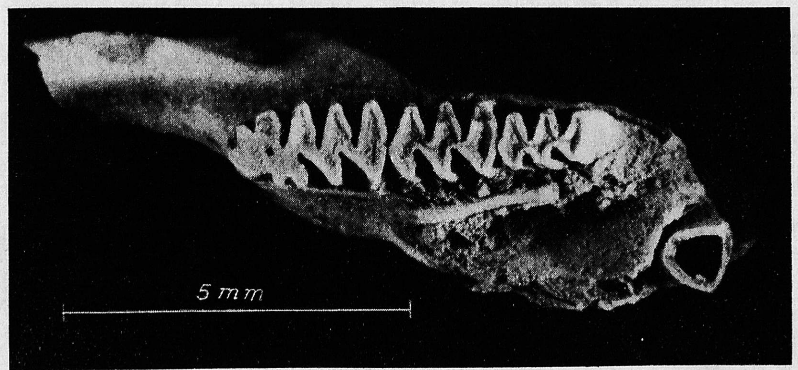
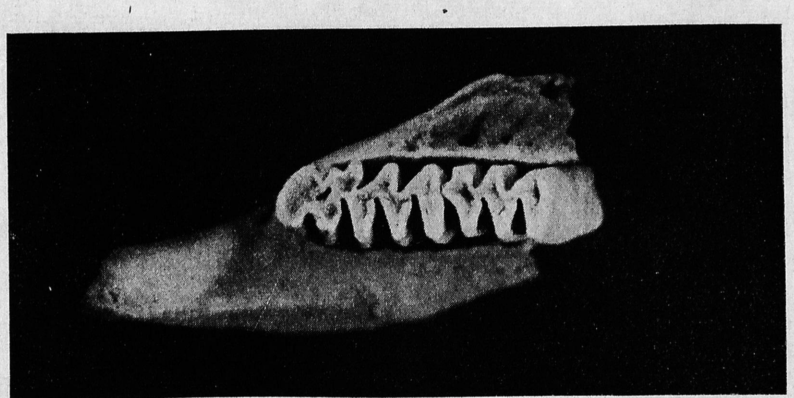
Plate LXIV

Mimomys gracilis (KRETZOI), mandibles.





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K. Kowalski

Redaktor pracy: dr M. Młynarski

Państwowe Wydawnictwo Naukowe — Oddział w Krakowie 1960

Nakład 800+150 egz. — Ark. wyd. 2,75. — Ark. druk. $3\frac{3}{4}$. — Papier rotogr. sat. kl. III
70×100 80 g Zam. 294/60 Cena zł 12,—

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