A STUDY OF A SKULL OF PROMEPHITIS FROM THE PONTIAN OF KÜÇÜKYOZGAT

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During the course of a visit to the fossiliferous region of Küçükyozgat in the Fall of 1953, with the help of a few workers, I opened a small pit in the fossiliferous locus I had discovered and excavated in 1951, which is just to the southeast of the site first visited by Tschachtli in 1941. During the course of this brief excavation, near the pit I dug in 1951, was found the skull of a small carnivore belonging to genus Promephitis, which is the first specimen of this genus reported to date from Anatolia. This skull was found embedded in the whitish calcareous marls of lacustrine origin at this site.

The genera and species from the whitish calcareous marls of lacustrine origin at Küçükyozgat, which have been determined so far are as follows:

1 For the location of the fossiliferous region at Küçükyozgat (Elmadağ) see: Tschachtli, 1942, p. 323; Şenyürek, 1953a, p. 1; Erol, 1954, fig. 1.
2 For the place where this skull was found see Şenyürek, 1953a, fig. 3.
3 Tschachtli, 1942, p. 325. In his report Tschachtli (1942, p. 326) mentions only the occurrence of Mastodon sp., Hipparion gracile Kaup, Sus erymanthus Roth and Wagner, Tragocerus sp. and Gazella sp. at this locus. For the locus visited by Tschachtli see Şenyürek, 1953a, fig. 2.
4 See Şenyürek, 1953a, p. 2; Şenyürek, 1953b, p. 142; Şenyürek, 1953c, p. 460.
Mastodon pentelici Gaudry and Lartet
Hipparion gracile Kaup
Sus erymanthius Roth and Wagner
Giraffa sp.
Tragocerus amaltheus Roth and Wagner
Palaeoryx pallasi (Wagner sp.)
Helicotragus rotundicornis Weithofer
Gazella gaudryi Schlosser (Gazella pilgrimi Bohlin)
Gazella capricornis Rodler and Weithofer (Gazella rodleri Pilgrim)
Gazella eleanorae Şenyürek
Oioceros rothii Wagner

This list of fossils clearly shows that these lacustrine deposits at Küçükyozgat belong to the Pontian Age, as has been stated previously by Tschachtli and me. In other words, this fauna belongs to the Lower Pliocene.

The members of the extinct genus Promephitis, first established by Gaudry, have been reported from the Pontian of Pikermi and Samos, from the Maeotic beds of Odessa region, from the Pontian of Ertemte in Mongolia and from the Upper Pliocene of Malusteni in Rumania. However, as will be shown in the following pages, the skull from Küçükyozgat differs in a number of features from all the other species of this genus described so far, thus clearly representing a new species. I have dedicated this new species to the memory of the late Professor Dr. Earnest Albert Hooton, my teacher of Anthropology at Harvard University.
A SKULL OF PROMEPHITIS

FAMILY MUSTELIDAE SWAINSON, 1835

SUBFAMILY MEPHITINAE GILL, 1872

GENUS PROMEPHITIS GAUDRY, 1861

PROMEPHITIS HOOTONI. NEW SPECIES

The holotype of this new species, preserved in the Division of Palaeoanthropology of the University of Ankara (No. Ky. P. 1), is represented by a broken skull and an associated broken mandible. The mandible, when found, was in normal occlusion with the upper jaw, the two being cemented by whitish calcareous marl, in which the skull was embedded and which also fills the cranial cavity. I have succeeded in freeing the mandible from the upper jaw, with only a small amount of damage to both jaws.

The skull is broken behind the orbits and behind the palate. The greatest part of the face and palate is retained, while the posterior portions of the vault and the base of the cranium are missing. The mandible is broken behind the left P4 and behind the alveolus of right M2. Thus the symphyseal region, the right corpus mandibulae and a part of left corpus mandibulae have been preserved.

14 Simpson, 1950, p. 112.
15 Pilgrim, 1931, p. 1 and Pilgrim, 1950, p. 114. It may however be pointed out here that Zittel (1925, pp. 72-73) and Weber (1928, pp. 334-335) classify Promephitis and other skunks in the subfamily Melinae.
16 Gaudry, 1862, p. 46; Pilgrim, 1931, pp. 52-53; Pilgrim, 1933b, p. 2; Simpson, 1950, p. 114.
17 On this occasion I wish to extend my thanks to the Peabody Museum of Harvard University, Professor Dr. H. L. Movius of Peabody Museum, Mrs. B. Schevill of the Mammals Department of Harvard University for sending me, upon my request, photographs of the upper and lower teeth of the modern American genera Mephitis, Spilogale and Conepatus, which are the nearest living relatives of the genus Promephitis, for comparison, and to Mr. Fred Orchard of the Peabody Museum for photographing them. I also wish to thank Prof. Dr. W. C. Osman Hill of the Zoological Society of London, Prof. Dr. W. K. Gregory and Mrs. R. H. Nichols of the American Museum of Natural History in New York, Mrs. Lilian Takeshita of the Library of Congress of Washington, D. C., Mrs. Elizabeth S. West and Miss L. E. Hoyne of Washington, D. C., and Miss Blythe Ellen Foote of the U. S. Consulate General in Dusseldorf, Germany, for procuring, upon my request, some publications. I also wish to thank Mr. Birhan Gökçe, photographer of the Faculty of Language, History and Geography of the University of Ankara, for doing the photographs.
All the upper and lower teeth preserved are moderately worn and the tip of the left Cl is broken, so that all the height measurements listed in Tables 1 and 2 are not of much comparative value. The amount of attrition on the teeth clearly shows that this skull belongs to a fully adult animal.

**THE SKULL AND THE UPPER TEETH**

The muzzle in *Promephitis hootoni* is relatively short, as is a characteristic of the members of genus *Promephitis*. When the skull is examined in norma verticalis it is seen that the postorbital process, preserved on the left side (fig. 1), is well developed. In this feature *Promephitis hootoni* differs from *Promephitis lartetii* Gaudry from Pikermi, which according to Gaudry lacks the postorbital process and from *Promephitis maeotica* Alexejew from Novo-Elisavetovka (Odessa region), in which this process is relatively feeble. In having a well developed postorbital process the Anatolian specimen approaches *Promephitis majori* Pilgrim from the Pontian of Samos. In the Anatolian skull, however, in norma verticalis, the upper part of the skull is not so abruptly contracted behind the postorbital process as in *Promephitis majori*.

When the skull of *Promephitis hootoni* is viewed in norma lateralis, it is seen that the upper profile of the face behind the superiormost and posteriormost point of the anterior nasal aperture is perfectly straight, rising steadily to a point between the postorbital processes and then turning backward (figs. 2 and 4). In the upper profile of the skull, the Anatolian specimen differs from that of *Promephitis majori*, in which, as can be seen from the drawing published by Pilgrim, the upper profile of the skull is slightly convex rising to a point considerably behind the postorbital process.

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18 As the upper and lower teeth preserved are enumerated in the following pages, they are not mentioned here.
19 Gaudry, 1862, p. 47; Pilgrim, 1931, p. 52; Pilgrim, 1933b, p. 4.
20 Gaudry, 1862, p. 47 and Pilgrim, 1931, p. 52. Regarding this feature of *Promephitis lartetii* Gaudry (1862, p. 47) states: "Le frontal ne forme point d'apophyse post-orbitaire."
21 Pilgrim, 1933b, p. 4.
22 Ibid., p. 4.
23 See ibid, fig. 1.
cesses and then curving backward and downward. Also in the Anatolian specimen the upper profile of the face appears to rise, relatively speaking, more steeply than that of *Promephitis majori*. As can be seen from the drawing published by Gaudry, in *Promephitis lartetii* the upper profile of the braincase and that of the preserved part of the face seem to approach that of *Promephitis majori*.

As the anterior margins of both orbits of the Anatolian skull are damaged, it is not possible to determine the location of the infraorbital foramen, which is found just forward of the anterior border of the orbit in *Promephitis lartetii* and *Promephitis majori*. The anterior nasal aperture in the Anatolian skull is subcircular in outline, with a maximum transverse diameter of 8.40 mm. It faces slightly upward and more forward (figs. 1-5).

In *Promephitis hootoni* the palate ends immediately at the end of M₁, showing that there was no M₂ (fig. 6). In having a palate that ends at the distal border of M₁, the Anatolian specimen approaches *Promephitis majori* and *Promephitis maeotica*. The shape of the dental arch of the Anatolian specimen (fig. 6) also closely resembles that of *Promephitis majori* depicted by Pilgrim.

In the Anatolian skull the left I₁ and the right I₁ have not been preserved, while the right I₁-I₂ and the left I₂-I₃ are retained intact. The crowns of the incisors are separated from each other by short spaces, as also seems to be the case in *Promephitis majori*. All three upper incisors possess high and relatively narrow crowns, as is also stated to be the case in *Promephitis lartetii* by Gaudry. In the first and second incisors the mesial and distal

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24 Ibid., fig. 2.
25 Ibid., fig. 2. The upper profile of the skull in *Promephitis majori* and other species of skunks is described by Pilgrim (1933b, p. 4) as follows: "The upper profile is gently arched, little less so than in Mephitis and Conepatus. Spilogale on the other hand has an almost straight profile. *Promephitis maeotica* seems to be intermediate between *P. majori* and Spilogale."
26 Gaudry, 1862, pl. VI, fig. 5.
27 Ibid., p. 47; Pilgrim, 1931, p. 52.
28 Pilgrim, 1933b, pp. 4-5.
29 Ibid., p. 13.
30 Ibid., fig. 4.
31 Ibid., fig. 4.
32 Gaudry, 1862, p. 46.
sides of the crown, in buccal view, are nearly parallel, while the
crown of the third upper incisor, in the same view, gently tapers
toward the tip.

Regarding the relative sizes of the upper incisors in Promep-
phitis majori, Pilgrim states: "Incisors increasing in size from I\textsuperscript{1} to I\textsuperscript{3};
I\textsuperscript{3} much the largest of the three."\textsuperscript{33} The same is also true for the upper
incisors of Promephitis hootoni (see Table 1).\textsuperscript{34} In Promephitis hootoni,
in all three upper incisors, the bucco-lingual diameter exceeds
the mesio-distal diameter, as also appears to be the case in Prom-
ephitis majori.\textsuperscript{35} As can be seen from Table 1, the crown index
decreases from the first toward the third upper incisor.

In Promephitis hootoni the right upper canine is not preserved,
while in the retained left canine the tip portion is broken and miss-
ing. The left upper canine is separated from the third upper
incisor by a diastema which is about 2.4 mm. wide at the base.
Although the tip portion is broken, the remainder of the canine
still projects considerably below the level of the other teeth. The
crown presents an anterior vertical edge, or keel, and a posterior
dge, with a small tubercle at its base. There is no cingulum on
the buccal face of the crown, while there is a trace of it at the base
of the lingual surface. In its morphology this tooth, which presents
an oval cross-section, closely resembles that of Promephitis majori,
as described by Pilgrim.\textsuperscript{36}

In size the upper canine of Promephitis hootoni is larger than
that of Promephitis majori and smaller than that of Promephitis maeo-
tica, being intermediate between these species (Table 3). In crown
index it conspicuously exceeds those of Promephitis majori and Pro-
memphis maetica.

The left \textsuperscript{3} is more worn than the right \textsuperscript{3} and in fig. 6, it
appears to be slightly more forward than the right \textsuperscript{3}, which is

\textsuperscript{33} Pilgrim, 1933b, p. 7.
\textsuperscript{34} Regarding the upper and lower incisors of Promephitis lartetii, Gaudry
(1862, p. 46) states: "Les incisives sont longues et fines; les latérales sont un peu plus grosses
que les miyennes." From this statement it would appear that in this feature the
upper incisors of Promephitis majori and Promephitis hootoni probably do not differ
much from those of Promephitis lartetii.
\textsuperscript{35} Pilgrim, 1933b, fig. 4.
\textsuperscript{36} Ibid., p. 7.
solely due to a distortion on the left side of the skull. That this tooth on the left side is a $P^3$ and not a $P^2$ is shown by its size, which is the same as that of the right $P^3$ and also by the fact that it normally occludes with $P_4$, as is the case also with the right $P^3$ (see figs. 2-4). Thus in *Promephitis hootoni* there are only two premolars on each half of the upper jaw ($P^3$ and $P^1$) and that in this species $P^1$ and $P^2$ were missing, as is also true for other species of *Promephitis*. The left $P^3$ is separated from the canine by a short diastema which is only about 0.9 mm. wide. As can be seen from the drawing published by Gaudry, this diastema is wider in *Promephitis lartetii* than in *Promephitis hootoni*. The Anatolian specimen seems to come closer to *Promephitis majori* in this feature as far as can be judged from the drawings published by Pilgrim.

$P^3$ of *Promephitis hootoni* is a two-rooted tooth and possesses a main cusp and a lower posterior tubercle behind it. On the lingual surface of the crown there is a slight belt of basal cingulum, which encircles the anterior end of the crown and extends to the mesio-buccal corner of the buccal surface. In the anterior face of the crown this cingulum juts out, thus forming a tiny anterior tubercle. This tooth of *Promephitis hootoni* presents an oval cross-section, as is also the case in *Promephitis majori*. However, it differs from that of *Promephitis majori*, in possessing a relatively better developed posterior tubercle.

In size, as expressed by the robustness value, $P^3$ of *Promephitis hootoni* is considerably larger than that of *Promephitis majori* and very slightly exceeds that of *Promephitis maeotica* (Table 4). In crown index the Anatolian specimen falls far below those of $P^3$ of *Promephitis majori* and *Promephitis maeotica*.

In $P^4$ of *Promephitis hootoni*, which has three main cusps, the paracone is higher than the metacone and the protocone is, in

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37 See Gaudry, 1862, p. 46; Pilgrim, 1931, p. 52; Pilgrim, 1933b, p. 7.
38 Gaudry, 1862, pl. VI, fig. 6.
39 Pilgrim, 1933b, figs. 2 and 4. Regarding this diastema in *Promephitis majori*, Pilgrim (1933b, p. 7) states: "Diastema of about 5 mm. behind the canine." However, this relatively wide space mentioned by Pilgrim, is not borne out by his drawings which show only a small diastema.
40 Pilgrim, 1933b, p. 7.
41 Compare figs. 2 and 6-7 with figs. 2 and 4 of Pilgrim (1933b).
mesio-distal direction, relatively long, amounting to more than half of the total crown length. In this tooth, the parastyle is small (figs. 6-7). The anterior margin of the tooth is formed by a thin belt of cingulum that extends from the protocone to the buccal surface, being however extremely reduced on the latter face of the crown. The small parastyle referred to is in reality a part of this cingulum. On the disto-lingual corner of the metacone is seen a relatively well developed and vertical strip of cingulum which however does not extend to the distal face of protocone, as is also the case in Promephitis majori. 42 On the whole, in the arrangement of cingulum, P4 of Promephitis hootoni approaches that of Promephitis majori, as described by Pilgrim. 43 P4 of Promephitis hootoni, however, differs conspicuously from that of Promephitis majori in having a protocone that is considerably longer in mesio-distal direction, and a smaller parastyle. 44 This tooth of Promephitis hootoni in having a relatively long protocone also differs from that of Promephitis maeotica in which, according to Pilgrim, the protocone is of about the same length as that of Promephitis majori. 45 P4 of Promephitis hootoni also has, in mesio-distal direction, a longer protocone than that of Promephitis alexejewi Schlosser from the Pontian of Ertemte in Mongolia. 46 On the other hand, as far as can be judged from the drawings published by Gaudry, 47 in the length of protocone and in the size of parastyle, P4 of Promephitis hootoni seems to come closer to that of Promephitis lartetii. 48

The size of P4 of Promephitis hootoni, as expressed by the robustness value, is larger than that of Promephitis majori and smaller than those of Promephitis maeotica and Promephitis alexejewi (Table 5). P4 of the Anatolian species is distinguished from that of Promephitis

42 Pilgrim, 1933b, p. 7.
43 Ibid., p. 7 and fig. 4.
44 See Ibid., p. 7.
46 See Schlosser, 1924, pl. I, fig. 31.
47 Gaudry, 1862, pl. VI, figs. 5-6.
48 Regarding the present condition of the upper teeth and the size of protocone of P4 in the holotype of Promephitis lartetii, Pilgrim (1931, p. 53) states: "It has evidently been damaged since it was figured by Gaudry, and has lost the upper canine, P3 and a part of P4. The protocone of P4 may quite easily have extended as far back as it is represented in Gaudry's figure, which is evidently farther than in P. maeotica and P. alexejewi."
lartetii in having a considerably smaller length measurement. In
crown index this tooth of Promephitis hootoni exceeds those of Prome-
phitis majori, Promephitis maeotica and Promephitis alexejewi.

The first upper molar of Promephitis hootoni has three main
 cusps, of which the paracone and metacone are considerably
 worn, while the protocone is better preserved. The metacone is
 near the paracone in length and the protocone is a crescent-shaped
cusp, the distal end of which extends to the vicinity of metacone
(figs. 6-7). External cingulum of this M\(^1\) is well developed. Extern-
to the paracone is seen a rather well developed parastyle, while
the metastyle is rudimentary. Lingual to the protocone there
exists a strongly developed internal cingulum. The internal cingu-
lum of Promephitis majori is described by Pilgrim as follows: "...pro-
nounced internal cingulum, very faint at the antero-internal angle but
widening out posteriorly into a broad basin-shaped valley which extends to
the base of the metacone;..."\(^49\) This description also nearly fits the
internal cingulum of M\(^1\) of Promephitis hootoni. However, in Prome-
phitis hootoni the disto-lingual corner of the internal cingulum is
rather angular, at least partly on account of an attrition facet on
the lingual half of the distal surface of the crown, which must have
been caused by friction against the second lower molar.

The first upper molar of Promephitis hootoni differs from that
of Promephitis majori mainly in having a longer protocone, which
is shorter in the Samos species.\(^50\) As far as can be judged from
the drawing published by Gaudry, the extension of protocone in
M\(^1\) of Promephitis hootoni comes near to that of Promephitis lartetii.\(^51\)
However, M\(^1\) of the Anatolian species differs from that of Prome-
phitis lartetii in having a longer external margin to the crown,
which is rather abbreviated in the Pikermi species.\(^52\) In the extension
of its protocone, M\(^1\) of Promephitis alexejewi approaches that of Pro-
memphis hootoni, but seems to differ from the Anatolian species in

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\(^{49}\) Pilgrim, 1933b, p. 8.

\(^{50}\) See Ibid., fig. 4. Pilgrim (1933b, p. 8) describes the protocone
in M\(^1\) of Promephitis majori as follows: "...protocone forming a crescentic ridge which
terminates at little more than half-way across the crown."

\(^{51}\) Gaudry, 1862, pl. VI, fig. 6.

\(^{52}\) Ibid., pl. VI, fig. 6. See also Pilgrim, 1931, p. 52.
having a somewhat shorter distal margin. First upper molars of the modern genera of skunks of the Americas differ from that of *Promephitis hootoni* in having usually better developed parastyles and metastyles.

In *M1* of *Promephitis hootoni* the bucco-lingual diameter exceeds the mesio-distal dimension (Table 6), as is characteristic also of other species of *Promephitis*. *M1* of *Promephitis hootoni* is larger in size than that of *Promephitis majori* and slightly surpasses that of *Promephitis lartetii*. It is somewhat inferior in size to that of *Promephitis alexejewi* and is considerably smaller than that of *Promephitis maeotica*, which has the largest *M1* in genus *Promephitis*. In crown index *M1* of *Promephitis hootoni* exceeds that of *Promephitis majori*, and comes near to that of *Promephitis alexejewi*. In this index *Promephitis hootoni* is far exceeded by *Promephitis maeotica* and *Promephitis lartetii*. It would appear that in this feature *M1* of *Promephitis hootoni* is more advanced than those of *Promephitis maeotica* and *Promephitis lartetii*, but is more primitive than that of *Promephitis majori*, in which the difference between the breadth and length measurements is less.

The length measurement of *P3* relative to the length of *M1* in three species of *Promephitis* are listed in Table 7. In is seen that in this index, expressing *P3* length as a percentage of *M1* length, *Promephitis hootoni* greatly exceeds *Promephitis majori* and also *Promephitis maeotica*, which is intermediate in this index between the Anatolian and Samos species. In the relative size of its *P3*, *Promephitis hootoni* is more primitive than *Promephitis maeotica* and *Promephitis majori*.

The length measurements of *P4* relative to those of *M1* are listed in Table 8. In this index *Promephitis hootoni* somewhat exceeds *Promephitis majori*, but falls short, in ascending order, of *Promephitis maeotica*, *Promephitis alexejewi* and *Promephitis lartetii*. It would appear that in this feature *Promephitis hootoni* is more primiti-

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53 See Schlosser, 1924, pl. I, fig. 31.
54 See Hall, 1936, pl. V, fig. 1.
55 Gaudry, 1862, p. 46; Schlosser, 1924, p. 12; Pilgrim, 1931, p. 52; Pilgrim, 1933b, pp. 7, 11 and 13.
56 See Pilgrim, 1933b, p. 13.
tive than Promephitis majori, but more advanced than Promephitis maeotica, Promephitis alexejewi and Promephitis lartetii.

THE MANDIBLE AND THE LOWER TEETH

In the mandible of Promephitis hootoni, the symphysis is moderately receding and the lower margin of the corpus mandibulae is straight from the lower end of symphysis to a point under the hinder part of M₂, where it turns upward (fig. 11). In the right corpus mandibulae there are three main foramina mentalia, arranged in a row, of which the first is under the anterior root of P₃, the second is between P₃ and P₄ and the third is below the distal root of P₄. On the left side the two anterior foramina are preserved but as the bone is broken over the distal root of P₄, the third foramen has not been retained (fig. 13).

The lower margin of corpus mandibulae in Spilogale, Promephitis maeotica and Promephitis lartetii is described by Pilgrim as follows: "In Spilogale the lower border of the ramus is horizontal or slightly convex from symphysis to angle, and apparently the same is the case in Promephitis lartetii and P. maeotica." 57 The lower margin of corpus mandibulae of Promephitis hootoni differs from these mainly in turning upward in the hinder part of M₂. As can be seen from the drawing published by Schlosser, 58 the mandible of Promephitis alexejewi differs from that of Promephitis hootoni in having a strongly convex lower margin under the premolars and molars. In this Mongolian species also the lower margin of the mandible turns gently upward and backward somewhat behind the second molar, that is slightly more posteriorly than it does in the Anatolian species. The lower margin of the mandible of Promephitis majori is described by Pilgrim as follows: "Its lower border is straight up to the hinder end of M₂ and then steps up to the angle, as in Mephitis and Conepatus." 59 However, an examination of the drawings published by Pilgrim, 60 shows that it would

57 Ibid., p. 8. For the configuration of the lower margin of the mandible in Promephitis lartetii see: Gaudry, 1862, pl. VI, fig. 5.
58 Schlosser, 1924, pl. 1, fig. 32.
59 Pilgrim, 1933b, p. 8.
60 Ibid., figs. 6A and C.
be more appropriate to describe the anterior part of the lower margin of the mandible of *Promephitis majori* as rather wavy. The lower margin of the mandible in the Samos species is slightly concave under the premolars and the anterior half of M₁, then it is slightly convex downward to a point somewhat behind the hinder end of M₂ where it turns upward. Although the configuration of the lower margin of the mandible of *Promephitis hootoni* comes nearer to that of *Promephitis majori* than to those of *Promephitis maeotica*, *Promephitis lartetii* and *Promephitis alexejewi*, still the Anatolian species differs from the Samos species in that the lower margin of its mandible is straight from the symphysis to the hinder part of M₂. Furthermore, in *Promephitis hootoni* the lower margin of the mandible turns upward somewhat more anteriorly than it does in the Samos species.

As can be seen from Table 9, the height of corpus mandibulae of *Promephitis hootoni*, measured below M₁, is the same as those of *Promephitis lartetii*, *Promephitis majori* and *Promephitis malustenensis* Simionescu from the Upper Pliocene of Malusteni in Rumania, but is lower than those of *Promephitis maeotica* and *Promephitis alexejewi*.

In the distance from the posteriormost point of the canine to the anteriormost point of M₁ (Table 10), the mandible of *Promephitis hootoni* exceeds *Promephitis majori* and is surpassed by *Promephitis maeotica*, *Promephitis lartetii* and *Promephitis malustenensis* in which this distance is very great indeed, supporting the suggestion of Pilgrim that this Upper Pliocene species from Malusteni in Rumania may have closer affinities with genus *Trocharion* or with *Mydaus* rather than with *Promephitis* in which the premolars are reduced.⁶¹

The crowns of left I₁-I₂ and right I₃ are retained intact in the mandible of *Promephitis hootoni*. Right I₁ and I₂ are represented by the lower halves of the crowns, while only the basal part of the crown of left I₃ has been preserved. The lower incisors are somewhat more compactly placed than the upper incisors. When the lower incisors are examined in occlusal view (figs. 8-10), it is seen that instead of standing in a row, on both the right and left

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side, the second incisor stands somewhat behind the first and third incisors. In all lower incisors the bucco-lingual diameter exceeds the mesio-distal diameter. As is the case in the upper jaw, in the mandible also in going from the first toward the third incisor the size increases, while the crown index decreases in the same direction.

The lower incisors of *Promephitis majori* are described by Pilgrim as follows: "Incisors of equal size and in the same line." In having an I₂ that stands behind the I₁ and I₃, *Promephitis hootoni* conspicuously differs from *Promephitis majori* and resembles some of the modern skunks (fig. 15). As Pilgrim has not listed the measurements of the incisors of *Promephitis majori*, a comparison of the sizes of the lower incisors of *Promephitis hootoni* with those of the Samos species has not been possible.

On both the right and left side, the lower canine is retained intact. The lower canine is separated from the third lower incisor by only a very short space. The tip portions of both canines are slightly worn. The lower canine, in norma lateralis, is much more curved than the upper canine, as in *Promephitis alexejewi*. As far as can be judged from the pictures, the same feature is also seen in *Promephitis lartetii* and *Promephitis majori*. In the lower canine of *Promephitis hootoni* there is no distinct anterior edge, the mesial surface in occlusal view being rounded, while there is a slight distal edge, with a small basal tubercle at its base. There is no buccal cingulum, while the internal cingulum is moderately developed, extending all along the basal part of the lingual surface of the crown. The internal cingulum forms a tiny eminence at the mesio-lingual corner of the crown, at the same place as that seen in the lower canine of *Conepatus mesoleucus mearnsi* shown in fig. 15. In the basal part of the buccal surface of the right lower canine is seen a wide groove, due to wear, that extends upward to the back of the tip. This worn groove must have been caused by

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62 Ibid., p. 8 and fig. 6B.
63 Ibid.
64 Schlosser, 1924, p. 11.
65 Gaudry, pl. VI, fig. 5.
66 Pilgrim, 1933b, figs. 2 and 6G.
friction against the mesial edge of the upper canine. In the left canine the upper section of this groove is present, but its lower part is completely missing.

The lower canine of _Promephitis majori_ is described by Pilgrim as follows: "Canine very concave behind, slenderer than in living genera, with well marked internal cingulum but practically no posterior cusp." In its general morphology the lower canine of _Promephitis hootoni_ recalls that of _Promephitis majori_, differing from it mainly in having a small basal posterior tubercle. As far as can be judged from the pictures, a small basal tubercle is present in _Promephitis lartetii_, but is lacking in _Promephitis alexejewi_.

As can be seen from Table 11, in size and also in crown index, the lower canine of _Promephitis hootoni_ far exceeds that of _Promephitis majori_. In crown height the lower canine of _Promephitis hootoni_ is higher than that of _Promephitis majori_ and lower than that of _Promephitis alexejewi_, being intermediate between these two species.

In _Promephitis hootoni_ P₁ is congenitally missing, as is a characteristic of genus _Promephitis_. P₂, on both the right and left side, is represented by only its alveolus which is placed close to the root of the canine, showing that there was no diastema between these two teeth (figs. 8 and 10). The distal part of the alveolus of P₂ is close to the anterior root of P₃ and is overhung by the mesial surface of the crown of this tooth. The alveolus shows that P₂ of _Promephitis hootoni_ was a small tooth, smaller than P₃, and that it was single rooted. In the presence of a P₂, _Promephitis hootoni_ resembles _Promephitis majori_ which has three lower premolars and differs from _Promephitis lartetii_ and _Promephitis alexejewi_ which have only two premolars, viz., P₃ and P₄. In the absence of a

67 In the left lower canine of _Promephitis majori_, depicted by Pilgrim (1933b, fig. 6C) is also seen a worn groove on the basal part of the buccal surface exactly as in the right lower canine of _Promephitis hootoni_.

68 Pilgrim, 1933b, p. 8.

69 Ibid., figs. 6A-C.

70 Gaudry, 1862, pl. VI, fig. 5.

71 Schlosser, 1924, pl. I, fig. 33.

72 Pilgrim, 1933b, p. 2.

73 Ibid., p. 8.

74 For these see Gaudry, 1862, p. 46 and Schlosser, 1924, p. 11.
A SKULL OF PROMEPHITIS

diastema between C₁ and P₃. *Promephitis hootoni* resembles *Promephitis majori*, which is also devoid of a diastema.⁷⁵

P₃ is preserved intact on both sides. This tooth has a main cusp, a tiny anterior tubercle, which is part of the faint internal cingulum, a somewhat larger posterior basal tubercle and two roots. In its general morphology P₃ of *Promephitis hootoni* resembles that of *Promephitis majori*.⁷⁶ Regarding the position of the lower premolars in *Promephitis majori* Pilgrim states: "The premolars lie more obliquely in the jaw than in Spilogale or Mephitis, but less so than in Conepatus."⁷⁷ The obliquity of P₃ in *Promephitis hootoni*, in occlusal view, is about equal to that of *Promephitis majori* (figs. 8-10). Regarding the position of P₃ in *Promephitis alexejewi*, Schlosser states: "In the lower jaw we see between the alveole of the canine and the preserved P₄ two alveoles, the first of which is detached outward, indicating therefore an obliquely inserted P₃."⁷⁸ As can be seen from the picture published by Schlosser⁷⁹ the position of the two roots clearly shows that P₃ of *Promephitis alexejewi* is more oblique than those of *Promephitis hootoni* and *Promephitis majori*.

It is seen from Table 13 that in size P₃ of *Promephitis hootoni* greatly exceeds that of *Promephitis majori* and is slightly smaller than that of *Promephitis maeotica*. In crown index this tooth of the Anatolian species slightly surpasses that of *Promephitis majori*, and falls short of that of *Promephitis maeotica*.

The right P₄ is damaged, while the left P₄ is preserved intact (figs. 8-10). The right P₄ is separated from P₃ by a short diastema that is about 0.5 mm. wide. This tooth has two roots. P₄ differs from P₃ mainly in being larger, in having a relatively higher main cusp, a comparatively wider posterior portion and also in not being implanted obliquely at all. The shape of the crown in oc-

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⁷⁵ Pilgrim, 1933b, p. 8. In *Promephitis lartetii* a wide diastema intervenes between C₁ and P₃, representing the space formerly occupied by P₄, which has been lost during the course of evolution of this species (see Gaudry, 1862, pl. VI, figs. 5 and 7).
⁷⁶ Pilgrim, 1933b, p. 8 and figs. 6 A-C.
⁷⁷ Ibid., p. 8.
⁷⁸ Ibid., fig. 6B.
⁷⁹ Schlosser, 1924, p. 11.
⁸⁰ Ibid., pl. 1, fig. 32.
clusal view and the relative sizes of the anterior and posterior basal tubercles are about the same as in *Promephitis majori*. In having a long axis nearly parallel to that of corpus mandibulae, P₄ of *Promephitis hootoni* differs from that of *Promephitis majori*, in which this tooth is moderately obliquely set, and also from that of *Promephitis alexejewi* in which it is even more obliquely implanted than that of the Samos species. P₄ of *Promephitis lartelii* is unfortunately damaged. But as far as can be judged from the drawing published by Gaudry, it would seem that the direction of P₄ in this species was similar to that of *Promephitis hootoni*.

P₄ of *Promephitis hootoni* is longer and wider than that of *Promephitis majori* and is very slightly shorter but broader than that of *Promephitis maeotica* (Table 14). In size, as expressed by robustness value, and also in crown index, it far exceeds those of *Promephitis maeotica* and *Promephitis majori*.

M₃ is preserved on the right side and on the left side it is missing as the bone is broken behind P₄ (fig. 8). In M₃ of *Promephitis hootoni* the trigonid section (breadth=4.00 mm.) is narrower than the talonid section (breadth=4.30 mm.). The external side of the trigonid section, in occlusal view, is slightly convex, while the internal side, between paraconid and metaconid, is concave. In the trigonid section of the tooth the length of paraconid is near that of protoconid, and the antero-posterior axis of paraconid is slightly bent inward and forward in relation to that of the protoconid, as is the case in *Promephitis majori*. The protoconid is considerably worn, but is slightly higher than the metaconid, which is also worn, but to a lesser extent than the protoconid. In occlusal view, the metaconid is slightly more posteriorly placed than the protoconid, as is also the case in *Promephitis alexejewi* and *Promephitis maeotica*. In buccal view, the protoconid is only slightly higher than the paraconid, which is due to the consider-

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81 See Pilgrim, 1933b, figs. 6 A-C.
82 Ibid., fig. 6B.
83 See Schlosser, 1924, pl. I, fig. 32.
84 Gaudry, 1862, pl. VI, fig. 7.
85 Pilgrim, 1933b, p. 9 and fig. 6B.
86 Schlosser, 1924, p. 11 and pl. I, fig. 32.
87 Pilgrim, 1931, p. 54.
able attrition suffered by the protoconid (figs. 11-12). In its fresh state protoconid was very probably considerably higher than the paraconid, as is true also for other species of Promephitis. In the talonid section, which is shorter antero-posteriorly (length=3.80 mm.) than the trigonid section (length=5.00 mm.), both the hypoconid and entoconid are worn, but the hypoconid is still slightly higher than the entoconid. Although the entoconid is worn, the presence of two worn scars on the upper surface of its lingual side suggests that in the fresh state of the tooth there probably were two small tubercles on this side. There is a third worn scar on about the middle of the distal margin of the crown. The entoconid is separated from the metaconid by a rather deep notch (see fig. 14). In this feature M₁ of Promephitis hootoni differs from that of Promephitis majori, which is devoid of such a deep notch and approaches that of Brachyprotoma obtusata (Cope) from the Pleistocene of North America. In M₁ of Promephitis hootoni there is no external or internal cingulum whatsoever.

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88 Pilgrim, 1933b, p. 9 and fig. 6C; Gaudry, 1862, pl. VI, fig. 5; Schlosser, 1924, pl. I, fig. 32.
89 Pilgrim, 1933b, fig. 6A.
90 See Hall, 1936, pls. 1, 2 and 3. As far as can be judged from the photographs published by Hall (1936, pl. 4, figs. 3-4 and pl. 5, fig. 2), the same feature is also seen in at least some specimens of modern genera of skunks. Regarding the genus Brachyprotoma, Pilgrim (1933b, p. 13) states: "Brachyprotoma from the Pleistocene of Pennsylvania and Arkansas, in spite of the absence of P¹ and P² clearly possesses many primitive characters such as the large size of P¹ and M₁; the large size of the anterior premolars; the smaller protocone in P¹; the weaker metaconid in M₁; the transverse elongation of M¹. It seems to be a survival of a much more primitive form than any species of Promephitis." In addition to the notch between the entoconid and metaconid in M₁, Promephitis hootoni resembles Brachyprotoma also in the dental formula, as this North American genus has two upper and three lower premolars (see Hall, 1936, p. 47). The Anatolian species also approaches the North American genus in the length of lower premolars relative to that of M₁ (see footnote 99). On the other hand, Promephitis hootoni differs from Brachyprotoma obtusata (Cope) in having a larger protocone in P¹ (see Hall, 1936, pl. 2, figs. 3 and 6 and pl. 3, fig. 4) and a higher metaconid in M₁ (see Hall, 1936, pls. 1-2). The Anatolian species also differs from Brachyprotoma in having a shorter P¹ relative to M¹ and a lower crown index in M¹. As calculated from the figures (P¹ length=6.0; M¹ length=3.7; breadth=5.7) given by Pilgrim (1933b), in Brachyprotoma pristina (included in Brachyprotoma obtusata by Hall, 1936), the index expressing the length of P¹ as a percentage of that of M¹ is 162.16 and the crown index of M¹ is 154.05. Although
M1 of *Promephitis majori* and of the living skunks is described by Pilgrim as follows: "M1 length much greater than the depth of the ramus and much exceeding that of the premolar series. In this respect it is strikingly different from all the living genera, in which M1 is either equal in length to or slightly less than the premolar series; trigonid a little longer than talonid; paraconid not very oblique to protoconid, as long as protoconid but lower; metaconid strong but lower than protoconid and almost on the same level with it. In *Spilogale* and *Mephitis* the position of the paraconid is about the same but the metaconid is somewhat higher. In *Conepatus* the paraconid is shorter and much more oblique; the metaconid is higher and the trigonid is no longer, sometimes much shorter than the talonid. The talonid in *Promephitis majori* is basin-shaped, having a tranchant hypoconid somewhat worn, and an entoconid on which two low cusps are apparent with a trace of a faint one behind them. *Spilogale* agrees with *P. majori* in the lowness of the entoconid, but the single entoconid cusp in *Mephitis* is much higher, and one of the two present on the entoconid of *Conepatus* is equally high."  

In its general morphology, M1 of *Promephitis hootoni* comes near to that of *Promephitis majori*, but, aside from its larger size, differs from it mainly in having a slightly more posteriorly placed metaconid. M1 of *Promephitis hootoni* approaches those of *Promephitis maeotica* and *Promephitis alexejewi* in the posterior position of the metaconid, but differs from these species in the absence of a cingulum. M1 of *Promephitis hootoni* is distinguished from that of *Promephitis lartetii* mainly in the position of metaconid, which, as stated by Pilgrim, is placed slightly before the protoconid in the Pikermi species. The position of metaconid in M1 in some features the Anatolian species further shortens the hiatus between *Promephitis* and *Brachyprotoma*, the presence of a larger protocone in P4, a higher metaconid in M1, a relatively shorter P4 and a relatively narrower M1, which are all advanced characters, shows that *Promephitis hootoni* is not a direct ancestor of the North American *Brachyprotoma*.

91 Pilgrim, 1933b, pp. 8-9 and 12.  
92 See ibid., fig. 6B.  
93 See Pilgrim, 1931, p. 54 and Schlosser, 1924, p. 11 and pl. I, fig. 32.  
94 See Pilgrim, 1933b, p. 2 and p. 13, and Schlosser, 1924, p. 12 and pl. I, fig. 32.  
95 Pilgrim, 1931, p. 53; Schlosser, 1902, P. 146; Gaudry, 1862, pl. VI, fig. 7.
of *Promephitis majori*\(^96\) appears to be intermediate between that of *Promephitis hootoni*, which has retained a more primitive condition in this feature, and *Promephitis lartetii*\(^97\) which represents an advanced stage in the location of its metaconid.

In length, \(M_1\) of *Promephitis hootoni* exceeds those of *Promephitis majori*, *Promephitis lartetii* and comes near to that of *Promephitis malustenensis* (Table 15). In length of \(M_1\), *Promephitis hootoni* is surpassed by *Promephitis maeotica* and *Promephitis alexejewi*. In robustness value \(M_1\) of the Anatolian species exceeds those of *Promephitis majori* and *Promephitis malustenensis*, but falls far below those of *Promephitis maeotica* and *Promephitis alexejewi*. \(M_1\) of *Promephitis hootoni* exceeds in crown index all species of *Promephitis* listed in Table 15. In the index expressing the talonid length of \(M_1\) as a percentage of the trigonid length of this tooth, *Promephitis hootoni* exceeds *Promephitis majori*, but falls far below *Promephitis alexejewi* in which the talonid section is relatively long (Table 16). In this index the Anatolian species comes nearer to *Promephitis majori* than to *Promephitis alexejewi*.

In *Promephitis hootoni* and in all other species of *Promephitis* listed in Table 17, the height of the corpus mandibulae measured below \(M_1\) is less than the length of this tooth.\(^98\) In the index expressing the height of corpus mandibulae as a percentage of \(M_1\) length, *Promephitis hootoni* falls in the range of genus *Promephitis* (Table 17). In this index *Promephitis hootoni* surpasses *Promephitis alexejewi*, *Promephitis malustenensis* and is exceeded by *Promephitis maeotica* and *Promephitis lartetii*.

As for the relative size of the lower premolars, the length of \(P_3\) relative to that of \(M_1\) in three species of *Promephitis* are listed in Table 18. In this index expressing \(P_3\) length as a percentage of \(M_1\) length, *Promephitis hootoni* exceeds both *Promephitis majori* and

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\(^{96}\) Pilgrim, 1933b, fig. 6B.  
\(^{97}\) Gaudry, 1862, pl. VI, fig. 7.  
\(^{98}\) See also Pilgrim, 1933b, p. 8 and p. 11. In this feature *Promephitis hootoni* and all other species of *Promephitis* conspicuously differ from *Trocharion albanense Major*, a primitive member of Mephitinae from the Tortonian stage of La Grive Saint Alban in France, in which \(M_1\) length is smaller than the height of corpus mandibulae below it (according to Pilgrim, 1933a, in *Trocharion albanense Major* \(M_1\) length is 8.5 mm., while the height of corpus mandibulae below it is 10.2 mm.).
Promephitis maeotica. In the index expressing $P_4$ length as a percentage of $M_1$ length Promephitis hootoni also surpasses those of Promephitis alexejewi and Promephitis majori (Table 19). Promephitis hootoni is more primitive in this feature than Promephitis majori and Promephitis alexejewi.99 In conclusion it can be stated that in Promephitis hootoni upper and lower premolars are reduced, but not to the same extent as in Promephitis majori from Samos.100

$M_2$ is represented on the right side only by its alveolus, of which the hinder part is broken (fig.8). The configuration of the alveolus indicates that this tooth had one root. The top of the alveolus is not horizontal but is seen to be slanting upward, in side view, forming an obtuse angle with the top of the alveolus of $M_1$. This shows that the crown of $M_2$ was not horizontally placed, but was slanting upward at the place of junction of corpus mandibulae with the anterior border of ramus mandibulae. The position of $M_2$ indicates that in this species there was no other molar behind $M_2$, as is also the case in other species of Promephitis.101 In the slanting position of $M_2$, Promephitis hootoni resembles Promephitis alexejewi102 and Promephitis majori,103 but differs from Promephitis lartetii in which $M_2$ is horizontally placed.104

99 In this index Promephitis hootoni is more advanced than the earlier Trocharion albanense Major, in which $P_4$, relative to $M_1$, is much longer (according to Pilgrim, 1933a, in Trocharion albanense $P_4$ length is 5.2 mm., $M_1$ length is 8.5 mm. and the index expressing $P_4$ length as a percentage of that of $M_1$, calculated from these figures, is 72.82).

100 The same result also comes out of the comparison of the index expressing the distance from the posteriormost point of the lower canine to the anteriormost point of the first lower molar as a percentage of $M_1$ length. The values obtained in three species are as follows:

- Promephitis hootoni 86.36
- Promephitis majori. Calculated from the figures given by Pilgrim, 1933b. 75.94
- Brachyprotoma pristina (Brachyprotoma obtusata according to Hall, 1936). Calculated from Pilgrim, 1933b. 87.83

In this index the Anatolian species exceeds Promephitis majori and approaches Brachyprotoma from the Pliocene of North America.

101 Gaudry, 1862, p. 46; Schlosser, 1924, pl. I, fig. 32; Pilgrim, 1933b, fig. 6.
102 Schlosser, 1924, pl. I, fig. 32.
103 Pilgrim, 1933b, fig. 6A and C.
104 Gaudry, 1862, pl. VI, fig. 5.
A SKULL OF PROMEPHITIS

DENTAL FORMULA

It is clear from the account given above that the dental formula of Promephitis hootoni is as follows:\(^{105}\):

\[
\begin{array}{cccc}
1 & 3/3 & C_1^1 & P_3^2 \\
M_1 & & & M_2
\end{array}
\]

In the foregoing pages points have been discussed in which the skull of Promephitis from Kıcıklıyzgat resembles and differs from the other species of Promephitis and allied genera. We can now summarize the results of these comparisons.

Promephitis hootoni resembles Promephitis lartetii Gaudry from the Pontian of Pikermi mainly in the depth of corpus mandibulae below M_1, in size of protocone and parastyle of P_4, in the length of protocone of M_1, in the presence of a small basal tubercle in the lower canine and in the direction of P_4. The Anatolian species differs from Promephitis lartetii in the upper profile of the skull, in possessing a well developed postorbital process, in the configuration of the lower border of the mandible and in dental formula, as the Pikermi species has only two lower premolars on each side. \(^{106}\) Promephitis hootoni is further distinguished from the Pikermi species in having a shorter diastema between C_1 and P_3, a longer external border and a lower crown index in M_1, in having a P_4 that is, relative to M_1, shorter, a slightly longer M_1, in the position of metaconid of M_1 and in the slanting position of M_2.

The comparisons with Promephitis maeotica Alexejew from the Maeotic beds of Novo-Elisavetovka (Odessa region) have unfortunately been of a limited scope, as I could not obtain the original report of Alexejew (1916). \(^{107}\) It has been fortunate, however, that Pilgrim, in his excellent studies referred to, has recorded some features, although a limited number, and measurements of *Pro-

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\(^{105}\) In its dental formula Promephitis hootoni differs from the living North American genera Spilogale and Mephitis which have 3 upper and 3 lower premolars (see Hall, 1936, pp. 55 and 64) and resembles the living genus Conepatus, of North and South America, which has also two upper and three lower premolars (see Weber, 1928, p. 335 and Hall, 1936, p. 73).

\(^{106}\) See Gaudry, 1862, p. 46.

\(^{107}\) Cited by Schlosser, 1924, p. 11; Pilgrim, 1931, p. 54; Pilgrim, 1933 a, p. 865; Pilgrim, 1933b, p. 12.
mephitis maeotica, which show that Promephitis from Küçükyozgat is different from this species. Promephitis hootoni approaches Promephitis maeotica in having a palate that ends at the end of M1 and in the position of metaconid of M1. The Anatolian species differs from the Ukrainian species in having a well developed postorbital process, in the configuration of the lower border of the mandible, in having a lower corpus mandibulae, a longer protocone in P4 and in lacking a cingulum in M1. With the exception of P3 and P4, the teeth of Promephitis hootoni are smaller than those of Promephitis maeotica. The crown index of M1 in Promephitis maeotica is higher, that is more primitive. In the Anatolian species, relative to M1, the P3 is longer while P4 is shorter than in the Ukrainian species. In the lower jaw of Promephitis hootoni P3, relative to M1, is longer than in Promephitis maeotica.

Promephitis hootoni approaches Promephitis malustenensis Simionescu from the Upper Pliocene of Malusteni in Rumania mainly in the height of corpus mandibulae, in the position of metaconid of the first lower molar108 and in the length of this tooth. But the Pontian species from Anatolia is distinguished from this upper Pliocene species of Rumania mainly in having a shorter distance between the posteriormost point of C1 and the anteriormost point of M1, in the position of the second lower incisor, in lacking a cingulum in M1 and in having an absolutely, as well as relatively, much broader first lower molar.110

Promephitis hootoni approaches Promephitis alexejewi Schlosser from the Pontian of Ertemte in Mongolia in having the lower border of the mandible turn upward behind M2, in the length of protocone and crown index of M1, in the position of metaconid of M1 and in the slanting position of M2. The Anatolian species differs from Promephitis alexejewi in having a straight lower border

108 See Simionescu, 1930, fig. 13.
109 Simionescu (1930, p. 140) describes the position of I2 in the Rumanian species as follows: “I2 se place en avant des autres comme chez certaines formes du mioène.”
110 According to the dental formula given by Simionescu there are two lower premolars in this Rumanian species (see Simionescu, 1930, p. 94). Regarding the missing lower premolar, however, Pilgrim (1933a, p. 859) states: “With regard to Promephitis rumana, I cannot resist the conclusion that the absence of P4 is pathological;....”
A SKULL OF PROMEPHITIS

in the mandible between the symphysis and hinder part of \( M_2 \)
and in having the lower margin of the mandible turn upward
more anteriorly. *Promephitis hootoni* is further distinguished from
*Promephitis alexejewi* in having a lower corpus height in the man-
dible, in dental formula, as the Mongolian species has only two
lower premolars on each side, \(^{111}\) in having a small posterior
tubercle in \( C_1 \), in the position of \( P_3 \) and \( P_4 \), in lacking a cingulum
in \( M_1 \), and in having a relatively shorter talonid in \( M_1 \). The teeth
of *Promephitis hootoni* are smaller than the available teeth of *Prom-
ephitis alexejewi* and with the exception of \( M_1 \) they possess higher
crown indices. Besides in *Promephitis hootoni* \( P^4 \) is shorter, relative
to \( M_1 \), while \( P_4 \), relative to \( M_1 \), is longer than in the Mongolian
species.

*Promephitis hootoni* approaches *Promephitis majori* Pilgrim, ap-
proximately from the middle levels of the Pontian beds \(^{112}\) in Samos,
in possessing a well developed postorbital process, in having a
palate that ends at the end of \( M^1 \), the shape of the dental arch,
in having the lower border of mandible turn up behind \( M_2 \), in
height of corpus mandibulae below \( M_1 \), in dental formula, rela-
tive size of upper incisors, shape of upper canine, the size of dia-
tema between \( C^1 \) and \( P^3 \), in the distribution of cingulum in \( P^4 \),
in lack of a diastema between \( C_1 \) and \( P_2 \), in the shape and posi-
tion of \( P_3 \), in shape of \( P_4 \), in lack of a cingulum in \( M_1 \) and in the
slanting position of \( M_2 \). *Promephitis hootoni* differs from *Promephitis
majori* in having the upper part of the vault of the skull behind
the postorbital process not so abruptly constricted, in upper pro-
file of the skull, in the shape of the lower border of mandible be-
tween symphysis and the hinder part of \( M_2 \) and in having the lower
border of the mandible turn up more anteriorly. *Promephitis hootoni*
is further distinguished from *Promephitis majori* in the size of the
posterior tubercle in \( P^3 \), in the smaller parastyle and longer proto-
cone of \( P^4 \), longer protocone of \( M^1 \), in the position of lower inci-
sors, in having a basal posterior tubercle in \( C_1 \), in position of \( P_4 \),
in the more posteriorly placed metaconid and very slightly longer
talonid of \( M_1 \). Furthermore, in *Promephitis hootoni* all the teeth are

\(^{111}\) See Schlosser, 1924, p. 11 and pl. 1, fig. 32.
\(^{112}\) Pilgrim, 1933b, p. 2.
conspicuously larger than in *Promephitis majori* and they, with the only exception of P3, possess higher crown indices. In *Promephitis hootoni* P3-P4 and P3-P4, relative to respectively M1 and M1, are longer, that is, more primitive than in the Samos species. The length of three lower premolars in *Promephitis majori*, relative to M1 length, is shorter, that is more advanced than in *Promephitis hootoni*.

The account given above clearly shows that *Promephitis hootoni* is distinct from all the species of *Promephitis* discussed. Thus, *Promephitis hootoni* represents a new species of genus *Promephitis*.

Although *Promephitis hootoni* is clearly a new species, still among all the species of *Promephitis* reviewed, it is more closely allied to *Promephitis majori* Pilgrim from Samos than to any other species of this genus. In most of its features *Promephitis hootoni* is more primitive than *Promephitis majori* but in a few features such as the larger protocone of P4 and the position of lower incisors it is more advanced than the Samos species. For this reason, neither one of the species from Anatolia or Samos may be considered as the direct ancestor of the other. It would appear more probable that *Promephitis hootoni* Şenyürek and *Promephitis majori* Pilgrim are the modified descendants of a common ancestral form that lived in basal Pontian or Upper Sarmatian Age in the region extending from Samos to Anatolia, which were united at that time.

**CONCLUSION**

1. *Promephitis hootoni* Şenyürek from the Pontian of Küçükyozgat represents clearly a new species of the extinct genus *Promephitis*.

2. Although a distinct species, *Promephitis hootoni* Şenyürek is more closely allied to *Promephitis majori* Pilgrim from the Pontian of Samos than to other species of the genus *Promephitis*. However, neither of these two species seems to be the direct ancestor of the other. It appears probable that *Promephitis hootoni* Şenyürek and *Promephitis majori* Pilgrim may be the modified descendants of a common ancestral form that might have lived in basal Pontian or upper Sarmatian times in the region extending from Samos to Anatolia, which were united in that remote period.
REFERENCES


PILGRIM, G. E. 1931. Catalogue of the Pontian Carnivora of Europe in the Department of Geology. British Museum (Natural History), London.


SCHLOSSER, M. 1902. Beiträge zur Kenntniss der Säugethierreste aus den süddeutschen Bohnerzen. Geologische und Paleontologische Abhand-
lungen, Neue Folge Band V (Der Ganzen Reiche Band IX.), Heft 3, pp. 117-258.


EXPLANATION OF THE FIGURES

Fig. 1. The skull of Promephitis hootoni Şenyürek from Küçükkyozgat in norma verticalis. Enlarged about 1.9 times.

Figs. 2-3. The skull of Promephitis hootoni Şenyürek from Küçükkyozgat in norma lateralis (right side). Enlarged about 1.9 times.

Fig. 4. The skull of Promephitis hootoni Şenyürek from Küçükkyozgat in norma lateralis (left side). Enlarged about 1.7 times.

Fig. 5. The skull of Promephitis hootoni Şenyürek from Küçükkyozgat in norma frontalis. Enlarged about 2.5 times.

Figs. 6-7. The palate of Promephitis hootoni Şenyürek from Küçükkyozgat in norma basilaris. Fig. 6: Enlarged about 1.7 times. Fig. 7: Enlarged about 3 times.

Figs. 8-10. The mandible of Promephitis hootoni Şenyürek from Küçükkyozgat in norma verticalis. Fig. 8: Enlarged about 1.5 times. Fig. 9: Enlarged about 3 times. Fig. 10: Enlarged about 5 times.

Fig. 11. The mandible of Promephitis hootoni Şenyürek from Küçükkyozgat in norma lateralis. Enlarged about 2.4 times.

Fig. 12. The mandible of Promephitis hootoni Şenyürek from Küçükkyozgat in norma lateralis (slightly tilted to show only the teeth of the right side). Enlarged about 2.7 times.

Fig. 13. The mandible of Promephitis hootoni Şenyürek from Küçükkyozgat in norma lateralis. Enlarged about 2.5 times.

Fig. 14. The mandible of Promephitis hootoni Şenyürek from Küçükkyozgat in norma lateralis (slightly tilted to show only the teeth of the left side). Enlarged about 2.8 times.

Fig. 15. The mandible of Conepatus mesoleucus mearnsi, from Oro Blanco Mts. of Arizona, in norma verticalis (Museum of Comparative Zoology of Harvard University No. 17956). Published through the courtesy of the Peabody Museum of Harvard University. Enlarged twice.
Measurements of the Upper Teeth of *Promephitis hootoni* Şenyürek, n.sp.¹

<table>
<thead>
<tr>
<th></th>
<th>Maximum Length ²</th>
<th>Maximum Breadth ³</th>
<th>Crown Height ⁴</th>
<th>Robustness Value ⁵</th>
<th>Crown Index ⁶</th>
</tr>
</thead>
<tbody>
<tr>
<td>I₁</td>
<td>1.00</td>
<td>1.80</td>
<td>—</td>
<td>1.80</td>
<td>180.00</td>
</tr>
<tr>
<td>I₂</td>
<td>1.20</td>
<td>1.8</td>
<td>—</td>
<td>2.16</td>
<td>150.00</td>
</tr>
<tr>
<td>I₃</td>
<td>1.50 ⁷</td>
<td>2.10</td>
<td>—</td>
<td>3.15</td>
<td>140.00</td>
</tr>
<tr>
<td>C₁</td>
<td>4.00</td>
<td>3.10</td>
<td>5.60 ++</td>
<td>12.49</td>
<td>77.50</td>
</tr>
<tr>
<td>P₃</td>
<td>2.80</td>
<td>1.90</td>
<td>2.40 ⁸</td>
<td>5.32</td>
<td>67.85</td>
</tr>
<tr>
<td>P₄</td>
<td>6.10</td>
<td>5.10</td>
<td>3.30</td>
<td>31.11</td>
<td>83.60</td>
</tr>
<tr>
<td>M₁</td>
<td>5.70</td>
<td>7.60</td>
<td>—</td>
<td>43.32</td>
<td>133.33</td>
</tr>
</tbody>
</table>

¹ In this study all the measurements are given in millimeters.
² The length measurements of the teeth are the maximum mesio-distal dimensions of the crown.
³ The breadth measurements of the teeth are the maximum bucco-lingual dimensions of the crown.
⁴ In all the teeth the height is measured on the buccal side of the crown.
⁵ Robustness Value = Max. Length x Max. Breadth.
⁶ Crown Index = Max. Breadth x 100
⁷ Measured at the base, the dimension taken at the tip region being 1.3 mm.
⁸ Right side.
A SKULL OF PROMEPHITIS

TABLE 2
Measurements of the Lower Teeth of Promephitis hootoni Şenyürek, n.sp.

<table>
<thead>
<tr>
<th>Tooth</th>
<th>Maximum Length</th>
<th>Maximum Breadth</th>
<th>Crown Height</th>
<th>Robustness Value</th>
<th>Crown Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>I1</td>
<td>0.80</td>
<td>1.40</td>
<td>—</td>
<td>1.12</td>
<td>175.00</td>
</tr>
<tr>
<td>I2</td>
<td>0.90</td>
<td>1.50</td>
<td>—</td>
<td>1.35</td>
<td>166.66</td>
</tr>
<tr>
<td>I3</td>
<td>1.20</td>
<td>1.50</td>
<td>—</td>
<td>1.80</td>
<td>125.00</td>
</tr>
<tr>
<td>C1</td>
<td>4.00</td>
<td>3.00</td>
<td>6.70+</td>
<td>12.00</td>
<td>75.00</td>
</tr>
<tr>
<td>P1</td>
<td>2.50</td>
<td>1.80</td>
<td>2.00</td>
<td>4.50</td>
<td>72.00</td>
</tr>
<tr>
<td>P4</td>
<td>3.70</td>
<td>2.80</td>
<td>3.00</td>
<td>10.36</td>
<td>75.07</td>
</tr>
<tr>
<td>M1</td>
<td>8.80</td>
<td>4.30</td>
<td>3.00+</td>
<td>37.84</td>
<td>48.86</td>
</tr>
</tbody>
</table>

TABLE 3
Measurements of the Upper Canine in Genus Promephitis

<table>
<thead>
<tr>
<th>Species</th>
<th>Maximum Length</th>
<th>Maximum Breadth</th>
<th>Crown Height</th>
<th>Robustness Value</th>
<th>Crown Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Promephitis hootoni Şenyürek</td>
<td>4.00</td>
<td>3.10</td>
<td>5.60+</td>
<td>12.40</td>
<td>77.50</td>
</tr>
<tr>
<td>Promephitis majori Pilgrim from Samos. Pilgrim, 1933b.</td>
<td>3.50</td>
<td>2.30</td>
<td>5.00 (appr.)</td>
<td>8.05</td>
<td>65.71</td>
</tr>
<tr>
<td>Promephitis majorica Alexejew from Elisavetovka. Pilgrim, 1933b.</td>
<td>4.80</td>
<td>3.30</td>
<td>9.70</td>
<td>15.84</td>
<td>68.75</td>
</tr>
<tr>
<td>Promephitis alexejewi Schlosser from Ertemte (Mongolia). Schlosser, 1924.</td>
<td>—</td>
<td>—</td>
<td>7.00</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>

1 In all the tables, the robustness values and the crown indices of the material taken from the literature have been calculated by me.
### TABLE 4
Measurements of P3 in Genus *Promephis*

<table>
<thead>
<tr>
<th>Species</th>
<th>Maximum Length</th>
<th>Maximum Breadth</th>
<th>Robustness Value</th>
<th>Crown Index</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Promephis hootoni</em> Şenyurek from Küçükyozgat.</td>
<td>2.80</td>
<td>1.90</td>
<td>5.32</td>
<td>67.85</td>
</tr>
<tr>
<td><em>Promephis majori</em> Pilgrim from Samos. Pilgrim, 1933b.</td>
<td>2.00</td>
<td>1.60</td>
<td>3.20</td>
<td>80.00</td>
</tr>
<tr>
<td><em>Promephis maeotica</em> Alexejew from Elisavetovka. Pilgrim, 1933b.</td>
<td>2.50</td>
<td>2.00</td>
<td>5.00</td>
<td>80.00</td>
</tr>
</tbody>
</table>

### TABLE 5
Measurements of P4 in Genus *Promephis*

<table>
<thead>
<tr>
<th>Species</th>
<th>Maximum Length</th>
<th>Maximum Breadth</th>
<th>Robustness Value</th>
<th>Crown Index</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Promephis hootoni</em> Şenyurek from Küçükyozgat.</td>
<td>6.10</td>
<td>5.00</td>
<td>30.50</td>
<td>81.96</td>
</tr>
<tr>
<td><em>Promephis larretii</em> Gaudry from Pikermi. Gaudry, 1862.</td>
<td>8.00</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td><em>Promephis majori</em> Pilgrim from Samos. Pilgrim, 1933b.</td>
<td>5.60est.</td>
<td>4.10</td>
<td>22.96</td>
<td>73.21</td>
</tr>
<tr>
<td><em>Promephis maeotica</em> Alexejew from Elisavetovka. Pilgrim, 1933b.</td>
<td>7.10</td>
<td>5.30</td>
<td>37.63</td>
<td>74.64</td>
</tr>
<tr>
<td><em>Promephis alexejewi</em> Schlosser from Ertemte (Mongolia). Schlosser, 1924.</td>
<td>8.00</td>
<td>5.00</td>
<td>40.00</td>
<td>62.50</td>
</tr>
</tbody>
</table>
### Table 6
Measurements of M¹ in Genus Promephitis

<table>
<thead>
<tr>
<th>Species</th>
<th>Maximum Length</th>
<th>Maximum Breadth</th>
<th>Robustness Value</th>
<th>Crown Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Promephitis hootoni Šenyürek from Küçükyozgat.</td>
<td>5.70</td>
<td>7.60</td>
<td>43.32</td>
<td>133.33</td>
</tr>
<tr>
<td>Promephitis lartetii Gaudry from Pikermi. Gaudry, 1862.</td>
<td>5.00</td>
<td>8.00</td>
<td>40.00</td>
<td>160.00</td>
</tr>
<tr>
<td>Promephitis majori Pilgrim from Samos. Pilgrim, 1933b.</td>
<td>5.60</td>
<td>6.50</td>
<td>36.40</td>
<td>116.07</td>
</tr>
<tr>
<td>Promephitis maetoech Alexejew from Elisavetovka. Pilgrim, 1933b.</td>
<td>5.70</td>
<td>9.10</td>
<td>51.87</td>
<td>159.64</td>
</tr>
<tr>
<td>Promephitis alexejewi Schlosser from Ertemte (Mongolia). Schlosser, 1924.</td>
<td>5.80</td>
<td>7.60</td>
<td>44.08</td>
<td>131.03</td>
</tr>
<tr>
<td>Promephitis alexejewi Schlosser from Erteinte (Mongolia). Schlosser, 1924.</td>
<td>6.00</td>
<td>8.00</td>
<td>48.00</td>
<td>133.33</td>
</tr>
</tbody>
</table>

### Table 7
The Length of P³ Relative to that of M¹ in Genus Promephitis

<table>
<thead>
<tr>
<th>Species</th>
<th>P³ Length × 100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Promephitis hootoni Šenyürek from Küçükyozgat.</td>
<td>49.12</td>
</tr>
<tr>
<td>Promephitis majori Pilgrim from Samos.</td>
<td>35.71</td>
</tr>
<tr>
<td>Promephitis maetoech Alexejew from Elisavetovka.</td>
<td>42.37</td>
</tr>
</tbody>
</table>
TABLE 8

The Length of P4 Relative to that of M1 in Genus *Promephitis*

<table>
<thead>
<tr>
<th>Species</th>
<th>P4 Length × 100</th>
<th>M1 Length</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Promephitis hootoni</em></td>
<td>107.01</td>
<td></td>
</tr>
<tr>
<td>Şenyurek from Küçükyozgat</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Promephitis lartetii</em></td>
<td>160.00</td>
<td></td>
</tr>
<tr>
<td>Gaudry from Pikermi.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Promephitis majori</em></td>
<td>100.09</td>
<td></td>
</tr>
<tr>
<td>Pilgrim from Samos.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Promephitis maeotica</em></td>
<td>124.56</td>
<td></td>
</tr>
<tr>
<td>Alexejew from Elisavetovka</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Promephitis alexejewi</em></td>
<td>135.59</td>
<td></td>
</tr>
<tr>
<td>Schlosser from Ertemte (Mongolia)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

TABLE 9

Height of Corpus Mandibulae under the Middle of the First Lower Molar in Genus *Promephitis*

<table>
<thead>
<tr>
<th>Species</th>
<th>Height (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Promephitis hootoni</em></td>
<td>7.00</td>
</tr>
<tr>
<td>Şenyurek from Küçükyozgat</td>
<td></td>
</tr>
<tr>
<td>(On the inside)</td>
<td></td>
</tr>
<tr>
<td><em>Promephitis lartetii</em></td>
<td>7.00</td>
</tr>
<tr>
<td>Gaudry from Pikermi.</td>
<td></td>
</tr>
<tr>
<td>Gaudry, 1862</td>
<td></td>
</tr>
<tr>
<td><em>Promephitis majori</em></td>
<td>7.00</td>
</tr>
<tr>
<td>Pilgrim from Samos.</td>
<td></td>
</tr>
<tr>
<td>Pilgrim, 1933b</td>
<td></td>
</tr>
<tr>
<td><em>Promephitis maeotica</em></td>
<td>7.00 appr.</td>
</tr>
<tr>
<td>Alexejew from Elisavetovka</td>
<td></td>
</tr>
<tr>
<td>Pilgrim, 1933b</td>
<td></td>
</tr>
<tr>
<td><em>Promephitis alexejewi</em></td>
<td>8.00 appr.</td>
</tr>
<tr>
<td>Schlosser from Ertemte (Mongolia). Pilgrim, 1933b.</td>
<td></td>
</tr>
</tbody>
</table>

1 According to Schlosser (1924, p. 12) this measurement is 18 mm. However, as can be seen from the picture published by Schlosser (1924, pl. I, fig. 32), the figure given by Pilgrim (1933b, p. 11) seems to be more correct.
Fig. 3

Fig. 4
M. Şenyürek

Fig. 7

Fig. 8

Belkete C. XIII
M. Şenyürek

Fig. 9

Fig. 10
M. Şenyürek

Fig. 11

Fig. 12

Fig. 13

Bilişten C. XIII
A SKULL OF PROMEPHITIS

TABLE 10
The Distance from the Most Posterior Point of the Lower Canine to the Most Anterior Point of the First Lower Molar in Genus Promephitis

<table>
<thead>
<tr>
<th>Species</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Promephitis hootoni</td>
<td>7.60</td>
</tr>
<tr>
<td>Gaudry, 1862.</td>
<td></td>
</tr>
<tr>
<td>Promephitis larretii</td>
<td>8.00</td>
</tr>
<tr>
<td>Gaudry from Pikermi.</td>
<td></td>
</tr>
<tr>
<td>Promephitis majori Pilgrim</td>
<td>6.00</td>
</tr>
<tr>
<td>Pilgrim from Samos. Pilgrim, 1933b.</td>
<td></td>
</tr>
<tr>
<td>Promephitis malustenensis</td>
<td>14.50 appr.</td>
</tr>
<tr>
<td>Simionescu from Malusteni. Pilgrim, 1933b.</td>
<td></td>
</tr>
<tr>
<td>Promephitis maeotica</td>
<td>80.00 appr.</td>
</tr>
<tr>
<td>Alexejew from Elisavetovka. Pilgrim, 1933b.</td>
<td></td>
</tr>
</tbody>
</table>

TABLE 11
Measurements of the Lower Canine in Genus Promephitis

<table>
<thead>
<tr>
<th>Species</th>
<th>Maximum Length</th>
<th>Maximum Breadth</th>
<th>Crown Height</th>
<th>Robustness Value</th>
<th>Crown Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Promephitis hootoni</td>
<td>4.00</td>
<td>3.00</td>
<td>6.70+</td>
<td>12.00</td>
<td>75.00</td>
</tr>
<tr>
<td>Gaudry, 1862.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Promephitis majori Pilgrim</td>
<td>3.50</td>
<td>1.80</td>
<td>4.50+</td>
<td>6.30</td>
<td>51.42</td>
</tr>
<tr>
<td>Pilgrim from Samos. Pilgrim, 1933b.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Promephitis alexejewi</td>
<td></td>
<td></td>
<td>9.00</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Schlosser from Ertemte (Mongolia). Schlosser, 1924.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

TABLE 12
Measurements of P₂ in Genus Promephitis

<table>
<thead>
<tr>
<th>Species</th>
<th>Maximum Length</th>
<th>Maximum Breadth</th>
<th>Robustness Value</th>
<th>Crown Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Promephitis majori Pilgrim</td>
<td>0.90</td>
<td>0.60</td>
<td>0.54</td>
<td>66.66</td>
</tr>
<tr>
<td>Pilgrim from Samos. Pilgrim, 1933b.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### TABLE 13
Measurements of $P_4$ in Genus *Promephitis*

<table>
<thead>
<tr>
<th>Species</th>
<th>Maximum Length</th>
<th>Maximum Breadth</th>
<th>Robustness Value</th>
<th>Crown Index</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Promephitis hootoni</em> Şenyürek from Küçüközyozgat.</td>
<td>2.50</td>
<td>1.80</td>
<td>4.50</td>
<td>72.00</td>
</tr>
<tr>
<td><em>Promephitis majori</em> Pilgrim From Samos. Pilgrim, 1933b.</td>
<td>2.00</td>
<td>1.40</td>
<td>2.80</td>
<td>70.00</td>
</tr>
<tr>
<td><em>Promephitis nectcia</em> Alexejew from Elisavetovka. Pilgrim, 1933b.</td>
<td>2.50</td>
<td>2.00</td>
<td>5.00</td>
<td>80.00</td>
</tr>
</tbody>
</table>

### TABLE 14
Measurements of $P_4$ in Genus *Promephitis*

<table>
<thead>
<tr>
<th>Species</th>
<th>Maximum Length</th>
<th>Maximum Breadth</th>
<th>Robustness Value</th>
<th>Crown Index</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Promephitis hootoni</em> Şenyürek from Küçüközyozgat.</td>
<td>3.70</td>
<td>2.80</td>
<td>10.36</td>
<td>75.67</td>
</tr>
<tr>
<td><em>Promephitis majori</em> Pilgrim from Samos. Pilgrim, 1933b.</td>
<td>3.00</td>
<td>2.00</td>
<td>6.00</td>
<td>66.66</td>
</tr>
<tr>
<td><em>Promephitis alexejewi</em> Schlosser from Ertemte (Mongolia). Schlosser, 1924.</td>
<td>3.80</td>
<td>2.00</td>
<td>7.60</td>
<td>52.63</td>
</tr>
</tbody>
</table>
A SKULL OF PROMEPHITIS

TABLE 15
Measurements of M₄ in Genus Promephitis

<table>
<thead>
<tr>
<th>Species</th>
<th>Maximum Length</th>
<th>Maximum Breadth</th>
<th>Robustness Value</th>
<th>Crown Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Promephitis hootoni Şenyürek from Küçükçayozgat.</td>
<td>8.80</td>
<td>4.30</td>
<td>37.84</td>
<td>48.86</td>
</tr>
<tr>
<td>Promephitis lartetii Gaudry from Pikermi. Gaudry, 1862.</td>
<td>8.00</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Promephitis majori Pilgrim from Samos. Pilgrim, 1933b.</td>
<td>7.90</td>
<td>3.50</td>
<td>27.65</td>
<td>44.30</td>
</tr>
<tr>
<td>Promephitis malustenensis Simionescu from Malusteni. Simionescu, 1930.</td>
<td>9.00</td>
<td>3.50</td>
<td>31.50</td>
<td>38.88</td>
</tr>
<tr>
<td>Promephitis maeotica Alexejew from Elisavetovka. Pilgrim, 1933b.</td>
<td>10.20</td>
<td>4.70</td>
<td>47.94</td>
<td>46.07</td>
</tr>
<tr>
<td>Promephitis alexejewi Schlosser from Ertemte (Mongolia). Schlosser, 1924.</td>
<td>10.60</td>
<td>4.80</td>
<td>50.88</td>
<td>45.28</td>
</tr>
</tbody>
</table>

TABLE 16
The Trigonid and Talonid Lengths in the First Lower Molar of Genus Promephitis

<table>
<thead>
<tr>
<th>Species</th>
<th>Trigonid Length</th>
<th>Talonid Length</th>
<th>Talonid L. × 100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Promephitis hootoni Şenyürek from Küçükçayozgat.</td>
<td>5.00</td>
<td>3.80</td>
<td>76.00</td>
</tr>
<tr>
<td>Promephitis majori Pilgrim from Samos. Pilgrim, 1933b.</td>
<td>4.50</td>
<td>3.30</td>
<td>73.33</td>
</tr>
<tr>
<td>Promephitis alexejewi Schlosser from Ertemte (Mongolia). Schlosser, 1924.</td>
<td>5.60</td>
<td>5.00</td>
<td>89.28</td>
</tr>
</tbody>
</table>
TABLE 17
Corpus Height of the Mandible Relative to the Length of $M_1$
in Genus *Promephitis*

<table>
<thead>
<tr>
<th>Species</th>
<th>Height of Corpus Mandibulae under $M_1$</th>
<th>Maximum Length of $M_1$</th>
<th>Corpus Ht. x 100</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Promephitis hootoni</em> Senyurek from Küçükyozgat.</td>
<td>7.00</td>
<td>8.80</td>
<td>79.54</td>
</tr>
<tr>
<td><em>Promephitis lartetii</em> Gaudry from Pikermi.</td>
<td>7.00</td>
<td>8.00</td>
<td>87.50</td>
</tr>
<tr>
<td><em>Promephitis majori</em> Pilgrim from Samos.</td>
<td>7.00</td>
<td>7.90</td>
<td>88.60</td>
</tr>
<tr>
<td><em>Promephitis malustenensis</em> Simionescu from Malusteni.</td>
<td>7.00 appr.</td>
<td>9.00</td>
<td>77.77</td>
</tr>
<tr>
<td><em>Promephitis maeotica</em> Alexejew from Elisavetovka.</td>
<td>8.50 appr.</td>
<td>10.20</td>
<td>83.33</td>
</tr>
<tr>
<td><em>Promephitis alexejewi</em> Schlosser from Ertemte (Mongolia).</td>
<td>8.00 appr.</td>
<td>10.60</td>
<td>75.47</td>
</tr>
</tbody>
</table>

TABLE 18
The Length of $P_3$ Relative to that of $M_1$ in Genus *Promephitis*

<table>
<thead>
<tr>
<th>Species</th>
<th>$P_3$ Length x 100</th>
<th>$M_1$ Length</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Promephitis hootoni</em> Senyurek from Küçükyozgat.</td>
<td>28.40</td>
<td></td>
</tr>
<tr>
<td><em>Promephitis majori</em> Pilgrim from Samos.</td>
<td>25.31</td>
<td></td>
</tr>
<tr>
<td><em>Promephitis maeotica</em> Alexejew from Elisavetovka.</td>
<td>24.50</td>
<td></td>
</tr>
</tbody>
</table>
TABLE 19
The Length of $P_4$ Relative to that of $M_1$ in Genus *Promephitis*

<table>
<thead>
<tr>
<th>Species</th>
<th>$P_4$ Length x 100</th>
<th>$M_1$ Length</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Promephitis hootoni</em> Şenyürek</td>
<td>42.04</td>
<td>35.84</td>
</tr>
<tr>
<td>from Küçükuyozgat.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Promephitis majori</em> Pilgrim</td>
<td>37.97</td>
<td>35.84</td>
</tr>
<tr>
<td>from Samos.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Promephitis alexejevi</em> Schlosser</td>
<td>35.84</td>
<td></td>
</tr>
<tr>
<td>from Ertemte (Mongolia).</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

TABLE 20
Measurements of $M_2$ in Genus *Promephitis*

<table>
<thead>
<tr>
<th>Species</th>
<th>Maximum Length</th>
<th>Maximum Breadth</th>
<th>Robustness Value</th>
<th>Crown Index</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Promephitis lartetii</em> Gaudry</td>
<td>3.00</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>from Pikermi. Gaudry, 1862.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Promephitis majori</em> Pilgrim</td>
<td>2.40</td>
<td>2.40</td>
<td>5.76</td>
<td>100.00</td>
</tr>
<tr>
<td>from Samos. Pilgrim, 1933b.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>