FOSSIL RANIDS from MIOCENE DEPOSITS of CENTRAL ANATOLIA

ORTA ANADOLU'NUN (TÜRKİYE) MİYOSEN FOSİL RANİDLERİ

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ABSTRACT: Two findings of fossil specimens of the genus *Rana* are described, both from Miocene (Tertiary) freshwater deposits from Turkey: *Rana barani* RÜCKERT-ÜLKÜMEN from Beşkonak Köyü near Kızılcahamam and *Rana* sp. 1 from Alpagut-Dodurga near Çorum Central Anatolia. The anatomy of the skull of *Rana barani* proves a close taxonomical relationship with *Rana ridibunda*, *Rana* sp. 1 is closely related to *Rana temporaria*. Comparisons with the fossil species *Rana strausi* ŠPINAR underline the taxonomical status of the described fossil species *Rana barani* and *Rana* sp. 1.

Key words: Fossil Ranids, Miocene, Central Anatolia

ÖZ: Orta Anadolu'nun iki ayrı bölgesindeki Miyosen yaşlı tatlısu tabakalarında bulunan *Rana* cinsi üzerine olan bir çalışmadır: Birincisi Kızılcahamam'ın Beşkonak köyünden *Rana barani* RÜCKERT-ÜLKÜMEN, 1980; ikincisi Çorum'un Alpagut–Dodurga bölgesinden *Rana* sp. 1. Taksonomik olarak *Rana barani* kafatası yapısından dolayı *Rana ridibunda'* ya, *Rana* sp. 1 ise *Rana temporaria* grubuna girer. Ayrıca bir fosil türü olan *Rana strausi* ŠPINAR la mukayesesinde de Türkiye'yi temsil eden her iki *Rana* cinsinin farklı türler olduğu tespit edilmiştir.

Anahtar kelimeler: Fosil Ranidler, Miyosen, Orta Anadolu

INTRODUCTION

The fossil material described in the present paper was given to the author by Prof. Dr. O. KAYA † and Dipl. Geol. İ. GÜNDOGAN both Dokuz Eylül University, İzmir. It has been found in Alpagut-Dodurga (Fig. 1), a locality 30 km NNW of Çorum (NE of Ankara, Turkey).

The fishlayer, 260 m thick, from Late Oligocene (?) to Middle Miocene is composed of a sequence of laminated marl, siltstone and carbonate, and subordinated lignite (Fig. 2). The here described frog originate from a finely laminated siltstone including a carbonate layer, 60 m above the basis, little above the lignite layer.

The holotype of *Rana barani* RÜCKERT-ÜLKÜMEN, 1980 is used here for comparison, a species that has been described from the Late Miocene of Beşkonak Köyü at Kızılcahamam (PAICHELER et al., 1978 and RÜCKERT-ÜLKÜMEN, 1995). The original description will be extended here and differences will be worked out between the species of *Rana barani* and *Rana* sp.1 that is firstly discovered. Freshwater fishes as well as the stratigraphical situation of the deposits of Çorum are described in detail in RÜCKERT-ÜLKÜMEN (1998).

The recent species of *Rana* are grouped within two monophyla, The *Rana ridibunda*-group (green or water frogs, adapted to aquatical life) and the *Rana temporaria*-group (brown frogs, adapted to a more terrestrial life) (GÜNTHER, 1996).

In the present study, the morphological differences of the squamosum and ilium bones of several fossil and Recent *Rana*-species will be compared and the position of *Rana barani* and *Rana* sp.1 within the genus will be discussed.

LOCATION of ALPAGUT-DODURGA, ÇORUM

The Oligo-(?) Miocene fish-and froglayers, which provide the material for this paper, are at Alpagut-Dodurga, approx. 30 km NNW of Çorum (Middle Anatolia, Turkey) (Fig. 1). The sequence, about 260 m thick, lays discordantly over a mixed package of Eocene age, the latter consisting of sandstone-siltstone sequences which were penetrated by a basalt pipe. Eight micropalaeontological samples have been taken and analysed from the whole sequence. The remainder of sample 1, a green-brown, rough chunked siltstone, consists of quartz, pyrite, limonite, and some glauconite, without any fossils. Most likely, the glauconite grains represent redeposited Eocene sediments. The samples 2 to 8 consist exclusively of freshwater deposits, yielding only pharyngeal teeth of several genera of Cyprinidae. A fine, laminated siltstone between the microsamples 3 and 4 supplied small fishes. Furthermore, this layer yielded remains of swamp plants (roots of Poaceae?), indicating a fossil rootzone.

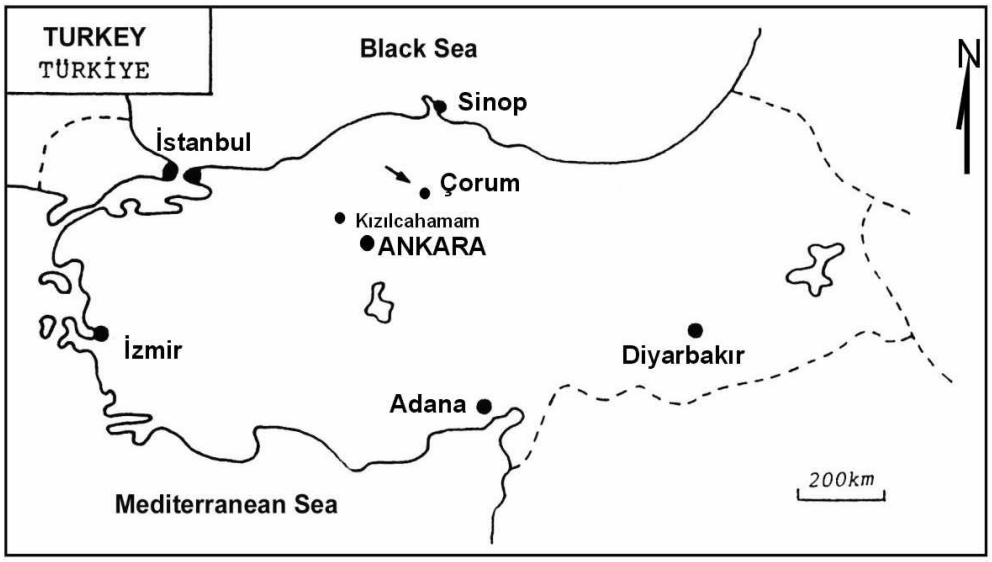

Figure 1 Geographical position of the location Alpagut-Dodurga, NNW of Çorum (Turkey).
Şekil 1 Alpagut-Dodurga'nın coğrafik konumu

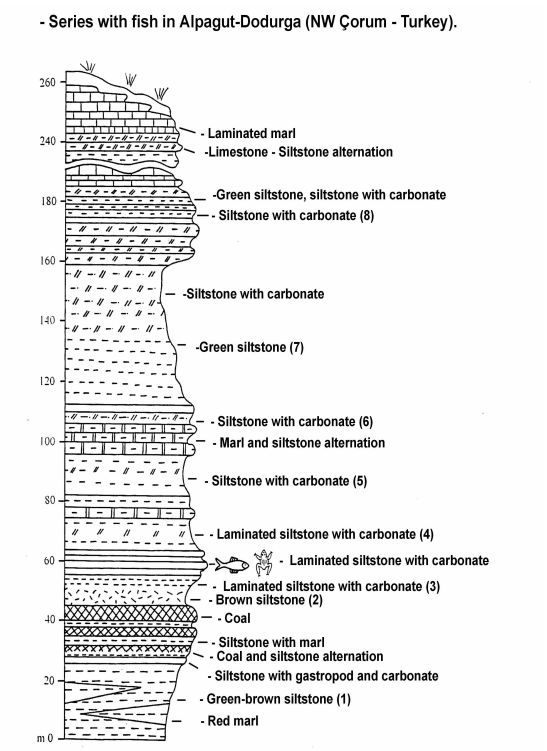

Figure 2 Stratigraphical profile of frog and fishlayers. 1-8: studied micropaleontological samples (from RÜCKERT-ÜLKÜMEN, 1998)
Şekil 2 Kurbağa ve balık fosilleri içeren istifin stratigrafisi. 1-8: daha önce değerlendirilmiş mikropaleontolojik örnekler

10 to 20 m deeper, some lignite prove temporary decrease of the water level and the existance of fens and swamps. Other evidences of brackish or marine parenthesis apart from the above mentioned glauconite were not found.

Taxonomy
Class: Amphibia
Order: Anura
Family: Ranidae GRAY, 1825
Genus: Rana LINNAAEUS, 1758
Typespecies: Rana temporaria LINNAEUS, 1758
Rana barani RÜCKERT, ÜLKÜMEN, 1980*
(Plate I-Figures 1-3; Figures 3-6; Table 1)
*1980 *Rana barani* n. sp. - RÜCKERT-ÜLKÜMEN, Fossile Fische und Frösche aus dem höheren Miozän von Zentral-Anatolien.: 1-14, 9 Taf.

Material: one complete specimen, holotype BSP Inv.-Nr. 1980 X 1.
Locus typicus: Kızılcahamam, Beşkonak Köyü, Ankara, Turkey.
Stratum typicum: Late Miocene.
Description: This specimen lies on the dorsal side. The head is oval and flat, 22 mm long and at maximum 25 mm wide. The relationship width/length is 1.136. Length of trunk is 61 mm. The front of the rostrum is round. The praemaxillare is strong with a short pars facialis and a broad pars dentalis. The right praemaxillare has 11 recurved teeth. Two third of the maxillare carry 31-32 fine and thin teeth. The quadratojugale (or quadratomaxillare) is strong and has one third of the length of the maxillare. It connects the distal end of the laterocaudal branch of the squamosum and the distal end of the maxillare. In front of the frontale are two anteriorly pointed nasale

(in their middle: 6 mm long and 2 mm wide). The vomer lies close to the ethmoid and reaches the nasale, it is bent a little at the torus dentigerus and bears approximately 12 little teeth on the caudal side (Fig. 6). Unfortunately neither the palatinum nor the pterygoid connections can be seen, because the imprint of the bones are on top of each other. The orbita, 11 mm long and 8 mm wide, are of almost rectangular shape with two dark impressions of eyes. The frontale is 10 mm long, 6 mm wide. The sutura medialis of the frontale is distinguishable, its linea medialis is sickle-shaped eminentia parietalis not distinguishable.

Clear imprints of the squamosa are situated on the caudal edges of the orbita, in close connection to the processus mandibulare. The ramus zygomaticus of the squamosa is longer than the ramus retrozygomaticus. The ramus posterolateralis is the longest of the three rami. Unfortunately, the prooticum is destroyed and has ony left a hardly recognisable impression (Plate I-Fig. 1).

The spine consists of 9 vertebrae. The atlas is squeezed rhombically. The vertebrae 2 to 7 are procoel, the 9th sacral vertebra is opithocoel and forms an angle of 60° to 65° with the os coccygis. The processi transversalia of vertebrae is seen in Fig. 6. Caudal to the 9th vertebra lies the 20 mm long os coccygis and the v-shaped ilia, the latter with a prominent corpus ossis ilii and a clearly visible, big acetabulum. The well preserved ischium is at the end of the trunk (Plate I-Fig. 3). The femur of the hind legs is 22 mm long and 3 mm wide. The tibia has a length of 26 mm and a width of 4 mm, while the fibulare is 10 mm long. The outstreched hind leg reaches only the frontal end of the eye sockets (Fig. 5a).

The bones of the front legs are not in the original place, being pushed to the front during embedding. The humerus lies dorsal and owns a strong impressio olecranon. The humerus has a direct contact to scapula, coracoid and clavicula (Fig. 6).

The scapula is only visible at the left front leg, being 7 mm long and 1 to 2 mm wide. The two ends of the clavicula are rounded. The humerus of the right front leg has a length of 14 mm, and is followed by the ulna and radius (10 mm long and 3 mm wide). The first carpale is small and round, the second a bit larger. The second and third phalanges are conjuncted with the second carpale. The third carpale is as small and round as the first one. The first phalange has only one bone which is developed rudimentarily. The second, third and forth phalange consist of three bones, the fifth is the longest with four bones (Fig. 6). The Ilium, ischium and femur are partly covered with quadrangular pigment marks (Plate I-Fig. 3).

Remark: The determination of Recent ranids follows more or less exclusively the external anatomy and the ethological characteristics, while palaeontological classification must be based on osteological characteristics. The here described of pigmentation is a rare case of preservation of a soft body character, providing additional information of taxonomic value.

Diagnosis: a medium-sized frog with the following characters:

1. Compact body
2. Length of trunk is 61 mm. Length of skull is 22 mm and fits in the length of trunk 2.73 and in the whole body 5.95 times.
3. The frontale has a very fine sutura medialis, the frontparietale is broad and crescent-shaped.
4. The praemaxillare and maxillare have complete teeth.
5. The quadratojugale is long and strong.
6. Small squamosa are at the left and right ventral side of the pterogoid, ramus posterolateralis is longer than ramus zygomaticus.
7. The spine consists of 9 short vertebrae.
8. Os coccygis is shorter and more slender than the ilium.
9. Sacral vertebra forms an angle of 60° to 65° with the os coccygis.
10. The ilium, ischium and femur are partly covered with quadrangular pigment marks.
11. The stretched hind leg reaches only the frontal end of the eye sockets.

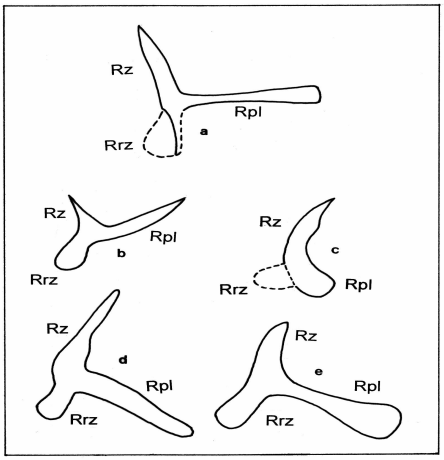

Figure 3 The squamosum of different fossil and Recent *Rana*-species

Şekil 3 Güncel Rana ve farklı fosil türlerinin squamosu

a) *Rana strausi* ŠPINAR 1980, (after ŠPINAR), b) *R. barani* RÜCKERT-ÜLKÜMEN, c) *Rana* sp. 1, d) *R. ridibunda* PALLAS, e) *R. temporaria* LINNAEUS
Rpl ramus posterolateralis, Rrz ramus retrozygomaticus, Rz ramus zygomaticus.

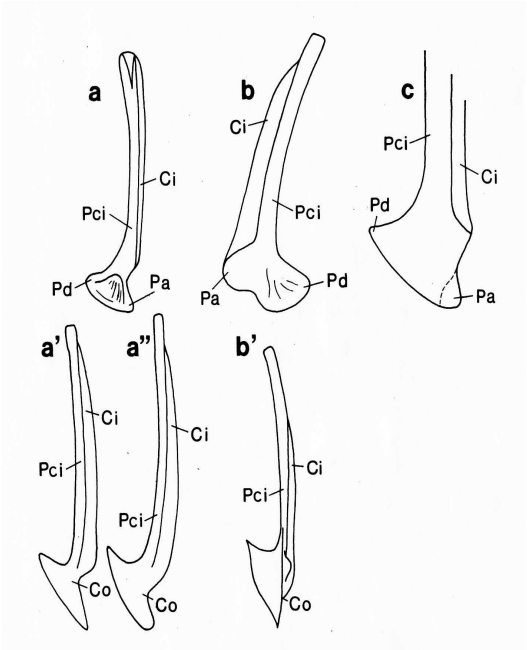

Figure 4 The ilium of different *Rana* species, fossil and Recent
Şekil 4 Fosil ve güncel farklı Rana türlerinin iliumu
a) *Rana barani*, a´) *Rana esculanta*, a´´) *Rana ridibunda*, b) *Rana* sp. 1, b´) *Rana temporaria*, c) *Rana strausi* (after ŠPINAR).
Ci Crista ossisi ilii, Co Collum ossis ilii, Pa Pars ascendens ossis ilii, Pci Pars cylindriformis ossis ilii, Pd Pars descendens ossis ilii.

Rana sp.1 (Plate II-Figures 1-2; Figures 3-4; Table 1)

Material: One complete specimen, BSP Inv.-Nr. 1980 X 976 a, b, panel and antipanel.
Locus typicus: Alpagut-Dodurga near Çorum, province Çorum , Central-Anatolia, Turkey.
Stratum typicum: Fish layer, Early to Middle Miocene.

Description: A medium-sized frog in dorsal view. The front and hind legs of the right and left carpal region and the distal phalanges are missing. The head is 17 mm long and at maximum 22 mm wide, length of trunk 60 mm. Head size fits in trunk length 3.5 times. The praemaxillare and maxillare have short, acuminate teeth; however, the poor conservation of the jaw-bone makes it impossible to distinguish the exact number of the teeth. The praemaxillare and maxillare have fine, acuminate teeth. The shape of the septomaxillum is semicircular. The nasale is frontally tapering off and caudally of oval shape, reaching to the orbita (9 mm long and 5 mm wide). The ethmoid is small and frontally slightly rounded. *Rana* sp. 1 has slender and thin frontparientale, which are fused in the middle.They reach up to the narrow and small os squamosum. Beneath both frontparietale are two deeply pressed, broken prootica-bones. Above the prootica is the squamosum with a short ramus posterolateralis and also a robust but longer ramus zygomaticus (Fig.3 c). Only fragments are left of the exoccipitalia (Plate II-Fig. 1).

In contrast to the holotype of *Rana barani* the number of the vertebrae are easily to distinguish, due to the good preservation. The atlas is rhombical, the second vertebra has short but robust processi transversalia, 3rd and 4th vertebrae have broader and longer processi transversalia, those of the 5th to 8th vertebrae have shorter and smaller lateral processes. The 9th sacral vertebra forms an angle of 70° to 80° with the os coccygis. *Rana* sp. 1 has a robust os coccygis with a thick frontal joint and a total length of 22 mm. This os coccygis laterally owns a small crista coccygis. The lenght of the ilium is 22 mm and the pars cylindriformis ossis ilii has a small crista ossis ilii. The corpus ossis illii partly destroyed. The length of femur is 29 mm, tibia is 29 mm, tarsale (tibia fibulare) is 12 mm long (Plate II-Fig. 2). The tibia-fibula joint of the streched hind leg reaches the frontal end of mouth (Fig. 5b).

Remark: In the recent species *Rana cameranoi* BOULENGER, 1886, the tibia-fibula joint of the streched hind leg also reaches the frontal end of mouth. This species is known as a mountain frog, but was found in forestal pools near the Black Sea by EISELT, 1965 (BAŞOĞLU & ÖZETI, 1973).

Diagnosis: a medium-sized frog with the following characters:
1. The head relatively small and narrow.
2. Length of trunk is 60 mm. Length of skull is 17 mm and fits in the lenght of trunk 3.5 and in the whole body 7.94 times.
3. The frontparietale is thin and slender.
4. The praemaxillare and maxillare complete with acuminated teeth.
5. The quadratojugale is short and strong.
6. The squamosum is robust, with small ramus posterolateralis and ramus zygomaticus.
7. The spine consists of 9 short vertebrae, with robust processi tranversalia.
8. Os coccygis and ilia approximately at the same size.
9. Sacral vertebra forms an angle of 70° to 80° with the os coccygis.
10. The femur, ilium and os coccygis are robust.
11. The tibia-fibula joint of the streched hind leg reaches the frontal end of mouth.

I think that this must be a new species. But, I could not describe it as a new species due to absence of sufficient data. For the present, I accepted it as *Rana* sp. 1.

Comparisons

Rana sp. 1 (Alpagut-Dodurga) in comparison with _Rana barani_ (Beşkonak)

While the skeleton of the holotype of *Rana barani* was found with preserved parts of the soft body in the diatom layers of Beşkonak, the fossil of *Rana* sp.1 of Alpagut-Dodurga shows pure osteological preservation. The animal is squeezed, with the dorsal side exposed.

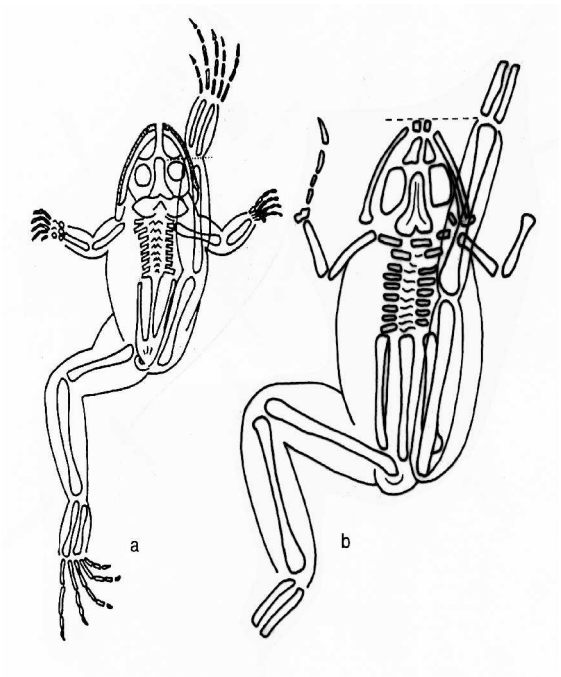

Figure 5 *Rana barani* RÜCKERT-ÜLKÜMEN from Beşkonak and *Rana* sp. 1 from Alpagut-Dodurga:
Şekil 5 Beşkonak'tan derlenen Rana barani RÜCKERT-ÜLKÜMEN ve Alpagut-Dodurga'dan derlenen Rana sp. 1
a) *Rana barani* RÜCKERT-ÜLKÜMEN: the tibia-fibula joint of the streched hind leg reaches the frontal end of the eye socket.
b) *Rana* sp. 1: the tibia-fibula joint of the streched hind leg reaches the frontal end of mouth. Scale 1/1.

In comparison with the holotype of *Rana barani*, *Rana* sp. 1 it is a little bit smaller, almost missing all foot bones, but with a well-preserved head. The latter is more triangular and more pointed than in *Rana barani*. The hind legs of the *Rana* sp. 1 are longer than in *R. barani*. The holotype of *Rana barani* misses the front and back foot bones, also some important characteristics of the other bones are not visible (Fig. 5 a, b; Table 1).

Taxonomical position of _Rana barani_ and _Rana_ sp.1

Rana barani belongs to the *ridibunda*-group (water frogs) because of the following osteological characters: robust frontoparietale, stout corpus ossis illi, relatively short hind legs (BÖHME 1977).

Rana sp.1 belongs to the *temporaria*-group (brown frogs) because of the following osteological characters: slender, thin frontoparietale, long hind legs (BÖHME 1977).

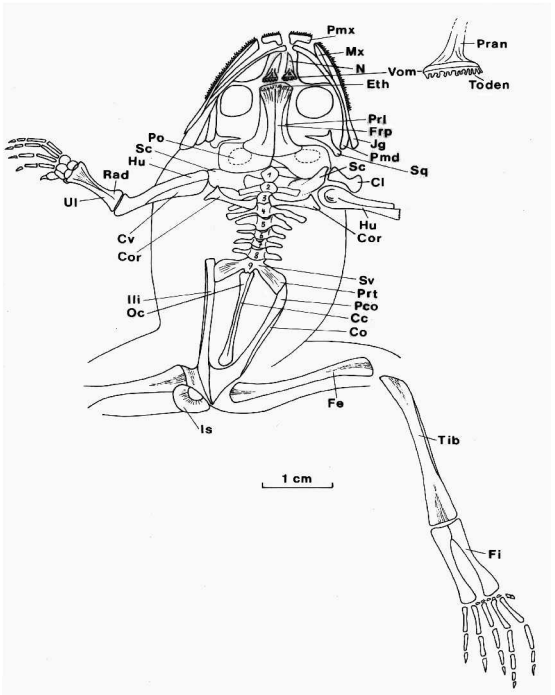

Figure 6 *Rana barani* RÜCKERT-ÜLKÜMEN 1980 holotype:
Şekil 6 Rana barani RÜCKERT-ÜLKÜMEN holotip
Co-Crista ossis ilii, Cor-Coracoid, Cv-Crista ventralis, Cc-Crista coccygis, Eth-Ethmiod Femur, Fi-Fibulare, Frp-Frontaparietale, Hu-Humerus, Ili-Ilium, Is-Ischium, Jg-Jugale, Mx- Maxillare, N-Nasale, Oc-Os coccygis, Pmd-Processus mandibulare, Pco-Pars cylindriformis ossis, Pmx-Praemaxillare, Po-Prooticum,
Prl-Processus Lateralis, Prt-Processus transversus, Rad-Radius, Sc-Scapula, Sq-Squamosum, Sv-Sacral vertebra, Tib-Tibia, Ul-Ulna, Vom-Vomer.

Comparisons of _Rana barani_ with other species

The ramus zygomaticus and ramus posterolateralis of the squamosum of *Rana barani* (Fig. 3 b) are thinner and shorter as those of *Rana strausi* (fossil, Fig. 3 a) and *Rana ridibunda* (recent, Fig. 3 d).

The ilia of *Rana barani* (Fig 4 a) have a firmer pars cylindriformis ossis ilii and a very thin crista ossis ilii. The area between pars descendes ossis ilii and the ventral pars ascendens ossis ilii is arched. The ilia differ from those of *Rana esculenta* (Fig. 4 a') and *Rana ridibunda* (Fig. 4a '') in the thin crista ossis ilii and the arched ventral margin.

Table 1 Dimensions (in mm) of *Rana* sp.1 from Alpagut-Dodurga in comparison with the holotype of *Rana barani* from Beşkonak.
Tablo 1 Beşkonak'taki Rana barani holotipi ile Alpagut-Dodurga Rana sp.1 tipinin karşılaştırmalı boyutları (mm)

	Rana sp. 1	*Rana barani*
Collection number	BSP 1980 X 976 a,b	BSP 1980 X 1 (holotype)
Location	Alpagut-Dodurga	Beşkonak
Length of trunk	60	61
Length of head	17	22
Ulna + Radius	13	10
Humerus	11	14
Coracoid	10	7
Femur	29	22
Tibia	29	26
Tarsale (Tibia)	12	10
Tarsale (Fibula)	12	10
Illium	22	22
Os coccygis	22	20

Comparisons of *Rana* sp. 1 with other species

The ramus retrozygomaticus and ramus posterolateralis of the squamosum of *Rana* sp. 1 from Çorum (Fig. 3 c) are thicker and shorter as those of *Rana temporaria* (Recent, Fig. 3 e) and *Rana strausi* (fossil, Fig. 3 a).

Rana sp. 1 (Fig 4 b) has a stronger ilium than *Rana temporaria* (Fig 4 b'), also a broader crista ossis ilii and a stronger pars cylindriformis ossis ilii. It shows a big pars ascendens ossis ilii and a protruding, large pars descendens ossis ilii between which the ventral margin is slightly curved inwards. In *Rana temporaria*, the ventral ilium shows a completely different outline (narrower and pointed), in *Rana strausi*, the ilium as a whole is much broader and more stout than in *Rana* sp.1.

Discussion

The Early Tertiary freshwater fauna of Beşkonak is known for more than 20 years (PAICHELER et al., 1978). Four different groups of amphibians have been discovered here: waterfrogs of the genus *Rana*, spadefoot toads of the genus *Pelobates*, also some unidentified salamanders and newts. Fishes are represented by Cyprinids of the genera *Leuciscus*, *Barbus*, *Tinca* and *Rutilus* (RÜCKERT-ÜLKÜMEN, 1995).

The slightly older deposits of Alpagut-Dodurga are situated only 200 km NE of Beşkonak, now reveal a comparable fish and frog fauna with *Rana*, *Leuciscus* and *Barbus*.

However, these two comparable fossil assemblages originate from petrologically different sediment: The Beşkonak-fauna descent from diatome layers and the Alpagut-fauna is embedded in finely laminated siltstones with thin horizons of carbonate.

Recent faunal assemblages of standing water bodies of the Northwest of the Anatolian plains still show similarities to the here described Tertiary amphibian and fish faunas: *Rana*, *Pelobates* and *Triturus* are occurring here together with the fish genera *Tinca* and *Rutilus* (BAŞOĞLU, M. & ÖZETİ, N. 1973).

Status and relationship of *Rana barani*

In spite of a long history of taxonomic work on the recent palaearctic water frogs, their taxonomy is still doubtful. Many species of this group cannot be distinguished morphologically, and the fact that the rare case of hybridogenesis occurs within this genus makes the application of a taxonomy based on external anatomy even more inappropriate (GÜNTHER, 1990). Thus, the actual taxonomy of Recent water frogs is mainly based upon cytogenetics (e. g. HOTZ et al., 1987, BEERLI et al., 1994), bioacustical methods (e.g. SCHNEIDER & SINSCH, 1992, 1999, SCHNEIDER et al. 1984, 1992) and finally biometrical procedures (SINSCH & SCHNEIDER, 1999), all of them not being applicable to fossil water frogs. The doubtful system of Recent water frogs prevents an adequate taxonomical analysis of the fossil *Rana* species (SANCHIZ, 1998). SANCHIZ (1998), therefore

designates *Rana barani* (among others) as nomen dubium; however, he refers this species to the ridibunda-group.

From the Eastern part of the Mediterranian, at least six Recent water frog species (*Rana epeirotica, R. shqiperica, R. bedriagae, R. cretensis, R. cerigensis* and *R. ridibunda*) are known. At least two of them (*R. bedriagae* and *R. ridibunda*) are reported from Turkey (SCHNEIDER & SINSCH, 1999; SINSCH & SCHNEIDER, 1999). Another taxa of uncertain validity (*Rana ridibunda caralitana*) was described from the Southwest of central Anatolia (ARIKAN, 1988, ATATÜR et al. 1990).

Apart from *Rana barani* RÜCKERT-ÜLKÜMEN, several other species of European Tertiary water frogs cannot surely be distinguished from each other: *Rana noeggerathi* MEYER, 1852, *Rana meriani* MEYER, 1853, *Rana aquensis* COQUAND, 1845; *Rana danubiana* MEYER, 1858; *Rana pueyoi* NAVAS, 1922; *Rana quellebergi* NAVAS, 1922; *Rana reussi* (MEYER, 1847) and Rana sieblosensis MEYER, 1863.

ÖZET

Bu makalede, ilki Orta Anadolu'da Kızılcahamam'ın Beşkonak Köyü dolaylarında (Rückert-Ülkümen, 1980), ikincisi ise Çorum'un Alpagut-Dodurga bölgelerinde bulunmuş iki Ranid fosili tanımlanmıştır. Bu fosiller Miyosen yaşlı tatlısu çökelleri içinde yer almaktadırlar.

Her iki fosil bulgusunun taksonomisi ve ayrıntılı tanımlaması yapılmıştır. Bunlardan, Kızılcahamam yöresinde bulunmuş olan *Rana barani* osteolojik karakterlerine göre *ridibunda* (su kurbağaları) grubuna aittir. Çorum yöresinde bulunmuş olan *Rana sp. 1* ise yine osteolojik karakterlerine göre *temporaria* (kahverengi kurbağalar) grubuna dahil edilmiştir.

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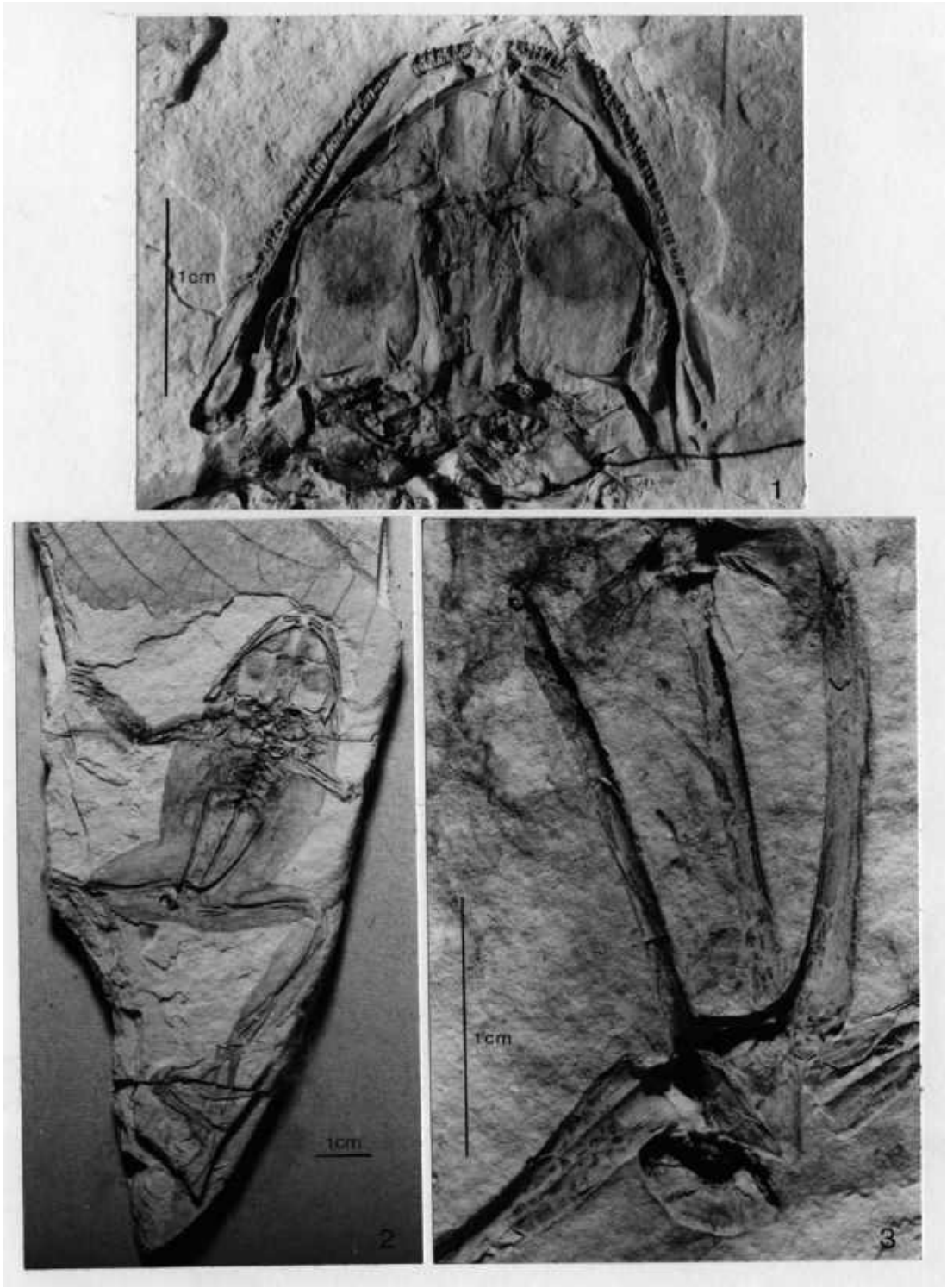

Plate I *Rana barani* RÜCKERT-ÜLKÜMEN 1980, holotype from Beşkonak (Kızılcahamam), Fe- BSP 1980 X 1
Fig. 1: details of head; Fig. 2: whole specimen with imprints of soft body; Fig. 3: Oc coccygis, ilium and ischium with pigmentation.
Levha I Rana barani RÜCKERT-ÜLKÜMEN 1980 holotip, Beşkonak (Kızılcahamam), Fe- BSP 1980 X 1

Şekil 1: Başın detayı; Şekil 2: Yumuşak dokulu gövdenin izi ile birlikte tüm görünüm; Şekil 3: Oc coccygis, ilium ve ischium ile pigmentler.

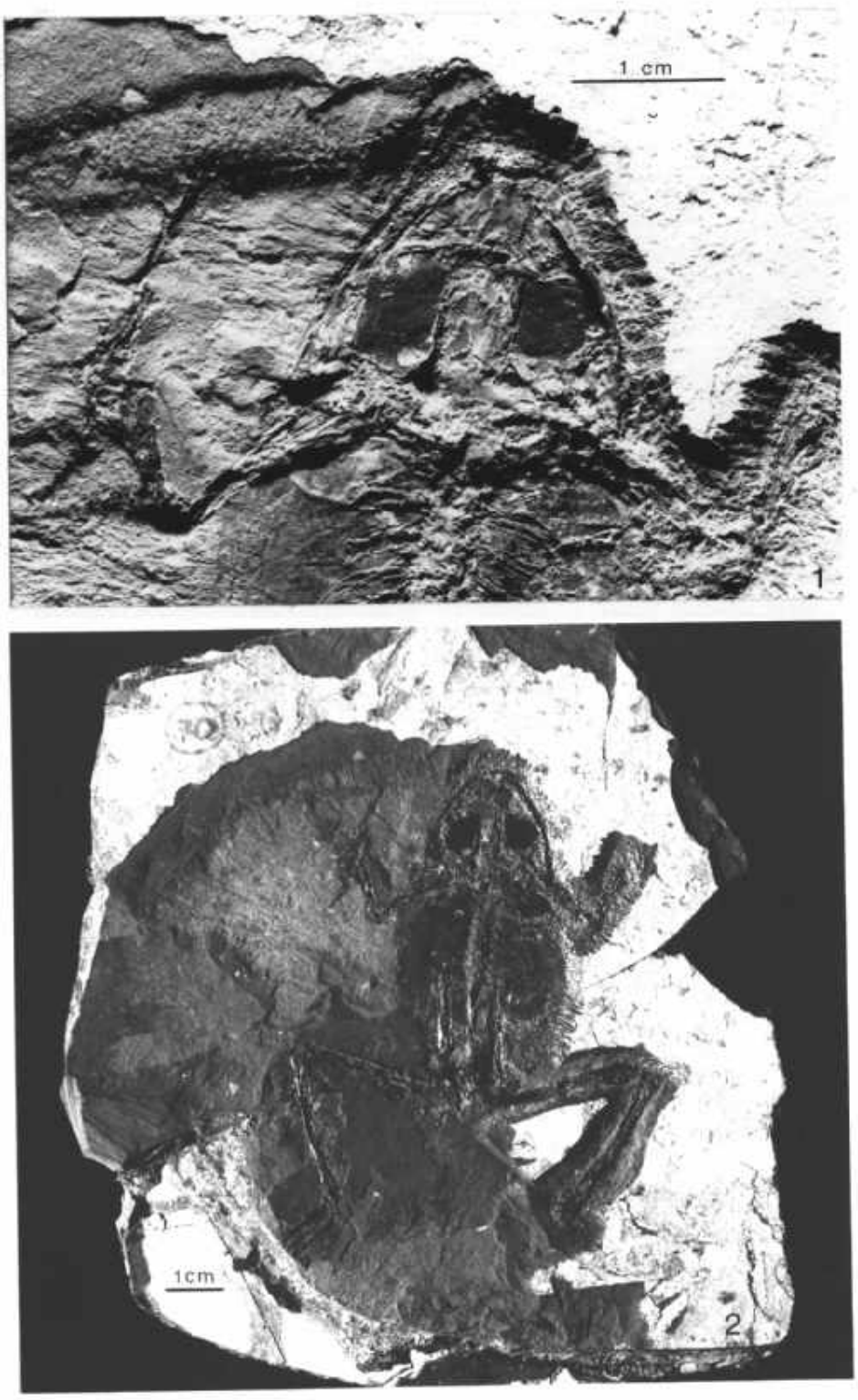

Plate II *Rana* sp. 1 BSP 1980 X 976 from Alpagut-Dodurga (Çorum)
Fig. 1: head with front extremities; Fig. 2: whole specimen.

Levha II Rana sp.1 BSP 1980 X 976 Alpagut-Dodurga (Çorum)
Şekil 1 : Baş ve ön ayaklar; Şekil 2 : Tüm görünüm