A NEW RECORD OF PIPISTRELLUS PIPISTRELLUS ALADIDN FOR TURKEY

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ABSTRACT

Between April 1977 and November 1981, during taxonomical researches on Turkish bats in Eastern Turkey, the presence of Pipistrellus pipistrellus aladdin Thomas, 1905, was first recorded from Turkey.

This study is based on a total of 163 specimens comprising 131 Pipistrellus pipistrellus pipistrellus (Schreber, 1774) and 32 P. p. aladdin. Out of 131 specimens, 81 were obtained from Western Turkey and used only for the determination of the distribution map of P.p. pipistrellus in this paper.

Field notes were also recorded. Weight and 37 external and cranial measurements were taken, they were used for comparison and statistical evaluation.

The results revealed that two subspecies of P. pipistrellus, the nominate form and P. p. aladdin exist in Turkey.

INTRODUCTION

Ellerman and Morrison-Scott (1951) noted that the distribution area of P. p. pipistrellus has included Asia Minor (Anatolia). Lewis and Harrison (1962) recorded the specimens (Nat. Hist. B.M.) from Çankiri as the nominate form. Lehmann (1966) recorded the four specimens from Bedirge near Antakya as P. p. mediterraneus Cabrera, 1904. Neuhauser and DeBlase (1971) stated that two specimens (Nat. Hist. B.M.) from Yalniz near Antalya represented the nominate form. Corbet (1978) also confirmed that Asia Minor (Anatolia) was in the distribution area of P. p. pipistrellus

As a native research-maker I intended to revise and clarify the situation in this study.
MATERIAL AND METHOD

During our researches, between April 1977 and November 1981, I obtained 82 specimens of *Pipistrellus pipistrellus* in Eastern Turkey and prepared them in the conventional museum type according to Mursaloğlu (1965).

As all of the female specimens except one were obtained from the breeding colonies, the majority of females were either pregnant or nursing adult. Therefore, all comparisons were made between only these adult females.

All the measurements were taken according to Thomas (1905b), Harrison (1964) and Albayrak (1985). Weight and 37 external and cranial measurements taken from each specimen were compared and statistically evaluated. For comparison the specimens were divided into age groups: infants, juveniles and adults according to the procedures of Andersen (1917) and Baagoe (1977). Only adult were taken into consideration.

To obtain the distribution area of *P. p. pipistrellus* in entire Turkey, I considered 81 specimens obtained from the other part of Turkey but their statistical data were not used.

All of the specimens have been deposited in the mammalian collection of the Department of Biology, Faculty of Science, University of Ankara.

RESULTS

Out of the 163 specimens, 131 were presenting the nominate form and 32 *P. p. aladdin*.

*Pipistrellus pipistrellus pipistrellus* (Schreber, 1774)

1774. *Vespertilio pipistrellus* (Schreber, Säugethiere, 1: 67.
Type locality: France.

Our specimens have the same diagnostic characters as colour and colour pattern recorded before by Schreber (1774).
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Fig. 1. Map of Turkey showing the collection localities and the approximate distribution of *P. p. pipistrellus* (△) and *P. p. aladdin* (●). The distribution of *P. p. pipistrellus* (▴) and *P. p. aladdin* (▼), the previous record of *P. p. mediterraneus* (■) and the transition area (□) between *P. p. pipistrellus* and *P. p. aladdin*.

Four external and seven cranial measurements given by Miller (1912) for *P. p. pipistrellus* agreed with the measurements (see Table 1) of our specimens.

Habitat: 49 specimens were collected in a very narrow space between the walls of two buildings in Artvin and another one was netted during a low flight in the field in Tokat at night.

During mid-July the colonies were consisting of 40–50 individuals. Adult females were either pregnant having twin embryos or nursing mother with twin infants. The colonies did not include adult males.

The daily flight would begin after sunset.

The identification of my specimens obtained from the Western, Middle and Northeast Turkey showed that the distribution of *P. p. pipistrellus* covers the whole Western, Middle and Northeast Turkey (Fig. 1).

Specimens examined: Total number, 144 from the following localities: Balıkesir province, Dinkçiler district (1 adult ♀ and 1 adult ♂, 18/6/1977); Tokat province, Turhal city, Pazar town (1 juvenile ♀, 12/8/1978); Ankara province, Çankaya (2 adult ♀♀, 23/9/1978); Artvin province, Hotel Genya (22 adult ♀♀, 14 juvenile ♀♀ and 13 juvenile ♂♂, 16/7/1979); Çanakkale province, Gökçeada (1 adult ♀, 3
Table 1. The statistical data of external and cranial measurements of adult *P. p. pipistrellus*:

number of individuals (N), range (R), mean (X) and standard deviations (±Sd).

<table>
<thead>
<tr>
<th>Measurements</th>
<th>N</th>
<th>R</th>
<th>X</th>
<th>±Sd</th>
</tr>
</thead>
<tbody>
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<td>80.0</td>
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<td>43.55</td>
<td>49.4</td>
<td>2.65</td>
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<tr>
<td>Length of tail</td>
<td>22</td>
<td>28.33</td>
<td>30.7</td>
<td>1.56</td>
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<td>Length of hindfoot</td>
<td>22</td>
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<td>8.7</td>
<td>0.45</td>
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<td>8.5-11</td>
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</tr>
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<td>Length of tragus</td>
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<td>5.1</td>
<td>0.24</td>
</tr>
<tr>
<td>Length of forearm</td>
<td>15</td>
<td>29.8-32.4</td>
<td>30.8</td>
<td>0.84</td>
</tr>
<tr>
<td>Length of tibia</td>
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<td>9.4-10.7</td>
<td>10.1</td>
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<td>0.58</td>
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<td>Length of 1st phalange of 4th digit</td>
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<td>10.3</td>
<td>0.35</td>
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<td>Greatest length of skull</td>
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<td>Total length of skull</td>
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<td>6.6</td>
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<td>0.10</td>
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<tr>
<td>Infraorbital breadth</td>
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<td>Length of mandibular toothrow</td>
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<td>Length of lower molar</td>
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<tr>
<td>Length of mandible</td>
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<td>8.4</td>
<td>0.25</td>
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<tr>
<td>Diameter of tympanic bulla</td>
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<td>Weight (g)</td>
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<td>3.5-5.0</td>
<td>4.5</td>
<td>0.53</td>
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</table>

adult 33, 12/9/1983); İzmir province, Çeşme city, Alaçatı town (6 adult ♀ ♂, 25/8/1984); Kastamonu province, Araç city (10 adult ♀ ♂, 18/8/1984); Aydın province, Kuşadası city (12 adult ♀ ♂, 13/6/1985; Kirklaresi province, Alpullu city (4 adult ♀ ♂, 1 adult ♂, 8/7/1985); Manisa province, Muradiye town (10 adult ♀ ♂, 14/6/1985) and Muğla province, Dalyan town, Ortaca (30 adult ♀ ♂, 26/5/1985).

*Pipistrellus pipistrellus aladdin* thomas, 1905


Type locality: 75 km. Wst. of Islahan, Iran.

Our specimens have the same diagnostic character as colour and colour pattern recorded before by Thomas (1905 a), Neuhauser and DeBlase (1971). These authors indicated an additional diagnostic character for *P. p. aladdin*, a white border, which was found in all of our specimens also.

The measurements of our specimens (see Table 2) agree with five external and nine cranial measurements taken by Neuhauser and DeBlase (1971) from the satisfactory samples series.

Table 2. The statistical data of external and cranial measurements of adult *P. p. aladdin*: number of individuals (N), range (R), mean (X) and standard deviations (±Sd).

<table>
<thead>
<tr>
<th>Measurements</th>
<th>N</th>
<th>R</th>
<th>X</th>
<th>±Sd</th>
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<td>30-37</td>
<td>33.0</td>
<td>1.40</td>
</tr>
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<td>7.9</td>
<td>0.38</td>
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<td>Length of ear</td>
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<td>9-12</td>
<td>10.7</td>
<td>0.84</td>
</tr>
<tr>
<td>Length of tragus</td>
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<td>0.53</td>
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<td>Length of forearm</td>
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<td>29-33</td>
<td>31.4</td>
<td>0.99</td>
</tr>
<tr>
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<td>Length of 1st phalange of 5th digit</td>
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<td>Length of 2nd phalange of 5th digit</td>
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<td>Greatest length of skull</td>
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<td>Total length of skull</td>
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<td>Condylar basal length</td>
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<tr>
<td>Breadth of braincase</td>
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<td>Mastoid breadth</td>
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<td>Diameter of tympanic bulla</td>
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<td>0.11</td>
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<tr>
<td>Weight (g)</td>
<td>31</td>
<td>4.5-8.0</td>
<td>5.5</td>
<td>0.99</td>
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</table>
Habitat: The specimens were obtained from a roof covering of a small building in the early July.

During early July, colonies were consisting of about 100 female individuals. Adult females were either pregnant having embryos or nursing mother with twin infants. The colonies did not include adult males.

The daily flight would begin after sunset.

Specimens examined: Total number, 32 from the following localities: Kars province, Aralik city, The State Farm of Igdir (1 adult ♀, 25/8/1968); Van province, Ercis city (30 adult ♀♀ and 1 infant ♀, 3/7/1979).

DISCUSSION

Although I did not have chance to see the type specimen of P. p. pipistrellus and that of P. p. aladdin, the original descriptions of them are clear enough to differ them easily. Therefore, I could differ them in my specimens from each other basing on the original descriptions, but unfortunately, I could not obtain any specimen from transition area between the two population, P. p. pipistrellus and P. p. aladdin. So I could not give any marginal records. Thus I have to leave a large blank space between two distribution areas in the map, Fig. 1.

As can be seen in Fig. 1, the four specimens obtained from Bedirge near Antakya and identified as P. p. mediterraneus are located in this blank space that is to say in the transition area between the P. p. pipistrellus and P. p. aladdin.

In this case P. p. mediterraneus may be considered as an intermediate form between well defined subspecies, P. p. pipistrellus and P. p. aladdin. This conclusion coincides with that revealed by Neuhauser and DeBlase (1971).

But, Lehmann (1966) identified the four specimens from Bedirge in the vicinity of Antakya as P. p. mediterraneus. However, the taxonomic identity of the four specimens from Bedirge will be clarify exactly after obtaining satisfactory sample series from the transition area between the distribution of the well defined subspecies, P. p. pipistrellus and P. p. aladdin.
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LITERATURE CITED


