Central and Southern Turkey, November 1993 and May 2023.

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In 1993 I spent 9 days exploring central and southern Turkey. I had no car, no camera, and almost no money, and moved by hitchhiking or overnight buses, but I had 3 cage traps for rodents (they had >50% success rate on the few occasions when I deployed them) and 3 pitfall traps (they never caught any vertebrates). Thirty years later I was in the same parts of the country for family reasons and had 8 days to look around again, this time without traps but with a car, a thermal scope, and a new camera that I was just learning to use. In the list of sites below I mention the year(s) of visit(s) for each one.

Turkey is a fascinating country with many endemic/near-endemic mammals. It deserves a lot more time, particularly the far east. So far, I've seen 30+ species there. Voles are of particular interest (there are 13 species of *Microtus* according to some classifications), but their taxonomy is unsettled, and field identification is difficult. Pay attention to colony size and location, and to habitat in general. Note that in 1993 I didn't have good books and probably made some errors.

The central plateau

The arid grasslands of central Turkey are unusual among Asian deserts in that the diversity of jerboas and gerbillines is very low (just one species of each) while the diversity of voles is very high. The voles are best found with a thermal scope in the last couple hours before sunrise, but it isn't easy and seeing them well enough to identify is even more difficult.

- <u>Pamukkale</u> (1993) is an amazing hill of white travertine with cascades of blue pools. It used to be possible to enjoy it in solitude if you got there before dawn. I trapped a **Harting's vole** near the base of the hill.
- Beyşehir Gölü Milli Parkı (2023) is a huge nature reserve surrounding the lake of the same name. A good place to access the extensive reedbeds is <u>Karaburun Beach</u> (37.63203, 31.54584), from which you can see **boars** and **water voles** at dusk. It was completely deserted in May but might be crowded on summer weekends. Good birding and herping.
- <u>Catalhöyük</u> (2023) is a little-visited archeological site, one of the oldest (probably the oldest) known cities. I saw a few roadkill **southern white-breasted hedgehogs** in the area, but was there only during the day.
- Hattuşaş (1993), the capital of an ancient empire, is now mostly grassland. I trapped an **East European field vole** and a **grey hamster** in a ditch, and saw a **Williams' jerboa** crossing the road in front of my bus from Ankara just before getting there.
- <u>Tuz Gölü</u> (2023) is a vast salt lake in the driest part of the plateau, famous for nesting flamingoes. The surrounding desert is a known site for **Dogramaci's** and **Anatolian voles**. Dogramaci's vole occurs W of E90 highway; telling it from Harting's vole is very difficult (it is slightly smaller), but Harting's is unlikely to occur in this habitat. I found one Dogramaci's vole at 38.76831, 33.64931 after hours of searching. Anatolian vole prefers south-facing slopes in the hills E of the highway; one area with a few small colonies was at 38.77579, 33.65361. It differs from other *socialis*-group voles in being lighter-colored, greyish rather than brownish, with weakly bicolored tail. **Social vole** is very similar to the other three and is also possible in these hills, but it has much larger colonies with lots of densely packed burrows; it is also smaller and longer-tailed but that's very difficult to see without trapping and there is some overlap.
- <u>Bozdağ</u> (2023), an arid mountain range crossed by Konya-Nevshehir highway, has the only continuously existing population of **Asian mouflon** in Turkey. It's a nature reserve (office at 38.00522, 32.92288). The central part of the range is fenced off and I don't know how easy it is to arrange access. There are a few hundred mouflons in the fenced area and a few dozen outside. I got binocular views of one ram from 38.01993, 32.92392. **Asia Minor ground squirrels** were common on the surrounding plain, but they never stand upright, and you can spot them only if they move, so you have to walk rather than drive. Mounds of **Anatolian blind molerats** are everywhere. The unfenced parts of the range have vole burrows under shrubs and rocky outcrops, and I found a few **Harting's voles** with a thermal scope at first light; they have warmer-colored flanks, slightly more prominent dark guard hairs than in other *socialis* group voles, and sometimes give whistling alarm calls. **Red fox** is common.
- <u>Cappadocia</u> (1993, 2023) is a very touristy area famous for dwellings carved in tufa hoodoos. Almost every rocky outcrop is hollowed out, and many abandoned dwellings look like purpose-built bat roosts, but there are so many of them that the chances of finding one occupied by bats are close to zero. I found a few **common bentwings** in a man-made cave outside <u>Göreme</u> in 1993 and no bats at all in 2023. Arid grasslands and wadis in the area are often riddled with burrows and mounds, mostly belonging to **Tristram' jirds** and **Anatolian blind molerats**. In 1993 I trapped two of those jirds outside <u>Göreme</u>. In 2003 I spent a night there spotlighting, but the moon was full, so rodents were difficult to find except in deep canyons and places shaded by outcrops and hoodoos. Those that I could find were difficult to approach. **Red foxes**, however, were abundant: in <u>Zelve Yolu</u> (38.67545, 34.86321) I could often see 3-4 at the same time with the thermal scope. Love Valley (Bağlıdere Vadisi, lower entrance 38.66326, 34.82882, upper entrance 38.64129, 34.81306), a canyon famous for clusters of tall penis-shaped hoodoos, was the best place for **Tristram's jirds**. I also saw a few jirds and a **social vole** near <u>Esbelli</u> (38.638354, 34.86540); in this area social voles' colonies

are mostly in road cuts. The only other animal seen that night was a **Brand't hamster** in a small rock pile (38.63238, 34.88066) outside <u>Ürgüp</u>.

The Taurus Mountains

The scenic Taurus (Toros) mountain range separates the central plateau from the southern coast. Its northern side looks like rolling hills but the southern slope is very steep in many places. There are extensive pine forests and (in some areas, mostly on the northern slope) hardwood forests at lower elevations, and gorgeous forests of pines, Cilician fir and cedarof-Lebanon higher up. The summits are mostly barren rock. These mountains have a few endemics, and the number keeps growing with more research.

- <u>Düzler Çamı Nature Reserve</u> (2023) is believed to have the world's only continuously existing population of **fallow deer** (although the one on Rhodos might prove to be native, too). It currently numbers around a hundred, and the only place to see the deer without a major effort is the ancient city of <u>Termessos</u>, where they graze near the parking lot (36.98793, 30.46786) at night. The problem is that the site and the access road close at 17:00, so you have to park outside the gate, hitchhike to the ruins, stay away from the main trail until dark, and then walk 13 km down to the entrance. But the effort is worth it because the entire area is excellent: it has **caracals** and might still have **leopards**. In addition to the deer, I saw a **forest dormouse** (at 36.98267, 30.46249) and an **eastern broad-toothed mouse** (along the access road at 37.00053, 30.48145). There were lots of **boar** digs. Another access road to the nature reserve starts at 36.98599, 30.56237 and passes by a fallow deer breeding enclosure. I didn't see any deer through the fence but saw two very large **European hares**. If you drive past the trout restaurant (excellent), cross the bridge and take a sharp right, the road climbs into dense forest that looks great for a lot of things, but the only mammals I saw there were a few **yellow-necked mice** (the only forest *Apodemus* in the area) around 36.95850, 30.50752. Birding is good and herping must be great when it's a bit warmer.
- Kargihan (2023; 37.00458, 31.38016) is an old caravan sarai on the main highway from Antalya area to the interior. It looks like it should have lots of bats, but all I could find was a few old bat droppings.
- <u>Manavgat River Road</u> (2023, turnoff at 37.07392, 31.65639) along the bottom of a deep canyon should be excellent for night drives. I was in a bit of a hurry, so I drove it up and down only once without using my thermal scope, and saw a **West Asian badger**, plus picked **common pipistrelles** and some high-flying myotis on my bat detector.
- <u>Altinbesik Cave</u> (2023; 37.03855, 31.63077) is flooded, electrified and can be visited by taking a boat tour. The only bat I could find was a **common bentwing**; it was hanging very high and I'm not sure it was alive. The surrounding nature reserve of the same name has huge rock faces potentially good for **European freetails**.
- <u>Belenalan</u> (2023) is a small town surrounded by fields where the recently split **Taurus ground squirrel** occurs in many locations according to iNaturalist reports. I was there twice in perfect weather, the habitat looked like souslik paradise, but the only mammal I saw was a totally unexpected **Persian squirrel** feeding on the ground under a clump of trees at 37.00150, 31.76853. It's a pleasant area for short walks, with good birding and some orchids.
- <u>Derebucak</u> (2023; 37.38935, 31.50377) is located at the edge of a broad glacial valley with ridiculous density of
 Nehring's blind molerat mounds. I was there on an overcast day and that proved very fortunate: with my thermal scope I found a **Taurus ground squirrel** (the shyest ground squirrel I've ever seen), and then a strangely blinking object that proved to be an **Anatolian blind molerat** digging a near-surface tunnel across a dirt road; the only part I could see was the tip of the snout but it's more than you normally see. The rare cinereous bunting occurs on the slope above the gas station.
- <u>Alacabel Pass</u> (<u>Alacabel Zirve</u>, 2023) is one of the highest (1825 m) and most scenic places in western Taurus accessible by paved road. A side trail (37.17101, 31.92224) provides access to **snow vole** habitat (I saw only burrows); **woolly dormouse** and **jackass shrew** are possible.
- <u>Aşağı Road</u> (2023; turnoff at 37.22082, 32.01629) runs through good coniferous forests and meadows where I saw a marten (almost certainly a **pine marten** as it was rather short-tailed and the habitat was too "boreal" for stone marten) at 37.21467, 31.98922. Very nice for birds including Krueper's nuthatch; **woolly dormouse** possible.
- <u>Demirişik</u> (1993) is a small village surrounded by canyons and oldgrowth coniferous forests. I stayed in an old barn and explored the area for two days. I saw a **roe deer** and a **woolly dormouse** and trapped a **Harting's vole** and two **steppe mice**. Birding is said to be great in spring and summer.
- Elmalı Boğazı (1993) is a village with easy access to high-elevation habitat with Caspian snowcocks and other interesting birds. I found an abandoned hut with a working wood stove and spent a day and two nights. Around the hut I trapped a *Mus* mouse (not sure which one) and a vole that I also never identified; I now think it was an Iranian vole because other voles of *socialis* group would be extralimital there. I also caught a snow vole much higher up; it looked

like a normal snow vole to me but recently snow voles of eastern Taurus were proposed to be a separate species (**Stekolnikov's snow vole**). A **stone marten** showed up near the hut a few times.

The southern coast

The southern coast of Turkey, historically known as Cilicia, is heavily developed, but still has some nice mammals.

<u>Fethiye</u> (1993) is a coastal town surrounded by nice pine forests. I found an **Anatolian serotine** in an abandoned building and some **least weasel** scat in the forest.

Side (2023) has a large area of ancient ruins, largely overgrown. I was there after dark for just half an hour but found a **Macedonian mouse** (at 36.76861, 31.39537), so they must be common there.

<u>Narlikyuy</u> (1993) is a small village west of Mersin, located in the center of the tiny range of **Cilician spiny mouse** (an ancient introduction of **Cairo spiny mouse**). It is common in the area, and I easily saw it after an hour or so of spotlighting on <u>Akyar Peninsula</u> (5 min walk from the bus stop towards the southeast).

Species list (marked * if identification is not 100% certain). Endemics and near-endemics in **bold**.

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 Southern white-breasted hedgehog 	Erinaceus concolor concolor	Çatalhöyük (roadkills)
1. Common bentwing	Miniopterus schreibersii	Göreme; Altınbesik Cave
 Common pipistrelle 	Pipistrellus pipistrellus	Manavgat River Rd. (bat detector only)
2. Anatolian serotine	Eptesicus anatolicus	Fethiye
– Myotis ?	<i>Myotis</i> sp.	Manavgat River Rd. (bat detector only)
3. Red fox	Vulpes vulpes anatolicus	multiple locations on the plateau
4. Pine marten*	Martes martes lorenzi	Aşağı Road
5. Stone marten	M. foina nehringi	Elmalı Boğazı
 Least weasel* 	Mustela nivalis boccamela	Fethiye (scat only)
6. West Asian badger	Meles canescens canescens	Manavgat River Rd.
7. Wild boar	Sus scrofa lybicus	Beyşehir Gölü NR; digs at Termessos
8. Fallow deer	Dama dama	Düzler Çamı NR (Thermessos)
9. Roe deer	Capreolus capreolus capreolus	Demirışık
10. Asian mouflon	Ovis gmelini gmelini	Bozdağ NR
11. Persian squirrel	Sciurus anomalus anomalus	Belenalan
12. Asia Minor ground squirrel	Spermophilus xanthoprymnus	Bozdağ NR
13. Taurus ground squirrel	S. taurensis	Derebucak
14. Forest dormouse	Dryomys nitedula phrygius	Düzler Çamı NR (Thermessos)
15. Woolly dormouse	D. laniger	Demirışık
16. Williamson's jerboa	Scarturus williamsi	Hattuşaş (road to Ankara)
17. Anatolian blind molerat	Nannospalax xanthodon labaumei	Derebucak; mounds at multiple locations
18. Tristram's jird	Meriones tristrami	Cappadocia (multiple locations)
19. Yellow-throated mouse	Apodemus flavicollis	Düzler Çamı NR
20. Steppe mouse*	A. whiterbyi	Demirışık
21. Eastern broad-toothed mouse	A. mystacinus	Düzler Çamı NR
22. Macedonian mouse	Mus macedonicus	Side
– Mouse ?	Mus sp.	Elmalı Boğazı
23. Cilician spiny mouse	Acomys cahirinus cilicicus	Narlikyuy
24. Grey hamster	Nothocricetulus cf. migratorius	Hattuşaş
25. Brandt's hamster	Mesocricetus brandti	Ürgüp
 Snow vole* 	Chionomys nivalis cedrorum	Alacabel Pass (burrows only)
26. Stekolnikov's snow vole*	C. stekolnikovi	Elmalı Boğazı
27. Water vole	Arvicola amphibius persicus	Beyşehir Gölü NR
28. East European vole	Microtus mystacinus relictus	Hattuşaş
29. Social vole*	M. socialis goriensis	Esbelli
30. Harting's vole*	M. hartingi ankarensis	Pamukkale; Bozdağ NR
	M. h. shevketi	Demirışık
31. Dogramaci's vole*	M. dogramacii	Tuz Gölü
32. Anatolian vole*	M. anatolicus	Tuz Gölü
33. Iranian vole*	M. irani karamani	Elmalı Boğazı
34. European hare	Lepus europaeus cyrensis	Düzler Çamı NR