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**VÝSLEDKY ZOOLOGICKÉ EXPEDICE NÁRODNÍHO MUSEA
V PRAZE DO TURECKA.**

1.

Úvod.

**RESULTS OF THE ZOOLOGICAL SCIENTIFIC EXPEDITION OF THE
NATIONAL MUSEUM IN PRAHA TO TURKEY.**

1.

Introduction.

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Národní museum v Praze podniklo v roce 1947 zoologickou expedici do Turecka. Cesta byla konána od května do září a byla cestou rázu informativního. Má se státi základnou k příštím cestám, jež budou věnovány speciálnímu zoologickému výzkumu jednotlivých faunistických oblastí Turecka.

Během této cesty byly pokud možno vyčerpány všechny technické metody k získání oekologických poznatků a pořízení sběrů obratlovců a bezobratlých turecké fauny. Veškerý dokladový materiál, pocházející z této expedice, jest uchován ve sbírkách Národního musea v Praze a výsledky jeho zhodnocování budou postupně uveřejňovány.

V tomto úvodním článku podáváme přehled jednotlivých sběracích stanovišť a zahrnujeme do něho také jejich stručnou charakteristiku.

Seznam jest stanoven v chronologickém pořádku, v jakém bylo na těchto lokalitách sbíráno. Číslům před jednotlivými stanovišti odpovídají čísla na přiložené mapce.

Geografická jména, uvedená jak v tomto seznamu, tak dalších článkách jsou shodná úplně s oficiálním současným názvoslovím, užívaným v Turecké republice. Nadmořské výšky, pokud jsou udány, jednotlivé vzdálenosti, jakož i jiné údaje jsou uváděny podle oficiální mapy 1 : 800 000, vydané T. C. Harita Umum Müdürlüğü. Podle této mapy jest také pořízena přiložená mapka i všechny ostatní mapky, užití v jednotlivých resultátech.

Cestou přes Balkán bylo příležitostně sbíráno na několika místech. Jsou to lokality: Irig, Fruška gora; Mladenovac, jižně od Beogradu; Krujac, Suva planina (Jugoslavie); Sofia; Pazardžik, západně od Plovdivu; Gorski Izvor u Haskova; Harmanli; Svilengrad (Bulharsko).

Sběrací stanoviště v Turecku spadají potom do těchto geografických oblastí: Trakie, Severoanatolský horský práh, Středoanatolská oblast, Střední Taurus, střední a vnější Východní Taurus.

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The National Museum in Praha undertook in 1947 a zoological expedition to Turkey. The journey was made in the months May—September and had in a way an informative character — it is to form the basis for future journeys, for the special zoological exploration of the different faunistic regions of Turkey

In the course of the journey all technical methods were utilised as far as possible for obtaining oecological knowledge and to make collections of the vertebrates and invertebrates of the Turkish fauna. All documentary material from this expedition is deposited in the collections of the National Museum in Praha, and the results of working it will be published gradually.

In this introductory article we give a survey of the respective collecting stations, including also a short characterisation of each.

The list is on the whole arranged in the chronological order in which collecting was made in the localities. The numbers preceding the different collecting stations correspond to the numbers in the appended map.

The geographical names used in this list as well as in the further articles correspond exactly to the present official terminology used in the Turkish Republic. The altitudes above sea-level, where given, the distances and other data are given according to the official map 1 : 800 000, published by T. C. Harita Umum Müdürlüğü. According to this map also the appended map and all other maps used in the different results were made.

In the course of the journey across the Balkans collecting was carried out in several places as opportunity offered. The localities concerned are: Irig, Fruška gora; Mladenovac, south of Beograd; Krujac, Suva planina (Yugoslavia); Sofia; Pazardžik west of Plovdiv; Gorski Izvor near Haskovo; Harmanli; Svilengrad (Bulgaria).

The collecting stations in Turkey are situated in the following geographical regions: Thrakia, North Anatolian Mountain Range, Inner Anatolian Region, Middle Taurus, Centre and Outer Eastern Taurus.

List of the Collecting Stations.

1. EDİRNE, 8. VI.—13. VI. — Collecting about 9 km. north of the town along the fields and roads near the Turkish-Greek-Bulgarian frontier along the river Meriç (Marica), already outside the natural Thracian steppe region. By sweeping were collected *Coleoptera*, *Hemiptera*, *Hymeno-*

ptera, Diptera, Thysanoptera, Orthoptera etc. Further were collected some specimens of *Citellus* and a great number of terrestrial *Mollusca*.

2. MOLLAFENERİ, 21. VI. — village about 35 km. northwest of İzmit on the southern slope of the Peninsula of Kocaeli. Region predominantly with xerophile scrub of mixed oaks and with sporadic habitats of black pine (*Pinus nigra*). Around the coast proper of the bay of İzmit Mediterranean vegetation predominates. The environment of the village is for its larger part cultivated, only the slopes above the bay of İzmit covered with beech forest are left in the original state. Collecting southeast of the village on the scrub-covered slopes, by rapping down and sweeping. Further collecting in a maintained well, partly covered with aquatic vegetation, at the bottom with plant detritus. Collected were chiefly *Insecta* (predominantly *Coleoptera*, *Orthoptera*, aquatic and terrestrial *Heteroptera* etc.), *Isopoda*; *Amphipoda*; *Mollusca*.

3. KAYNAŞLI, BOLU DAĞLARI (fig. 1), 21. VI. — collecting at the lower limit of forest growth at an altitude of about 900—1.100m. in the pass over the Bolu dağları Mts. between Düzce and Bolu near the village of Kaynaşlı. It is a region of moist beech (*Fagus orientalis*) forest on southern slopes with an admixture of firs (*Abies bornmülleriana* MATTF.). Sifting obtained from the humus under rhododendrons. Collected were predominantly *Mollusca*, *Coleoptera* and *Hemiptera* (*Aradidae*). Of *Vertebrata*, *Microtinae* material was collected.

4. GEREDE, 22. VI. — town in the western part of the Gerede — Çerkez—Ilgaz Lowland, covered with remnants of oak forests and *Pinus nigra* ARNOLD. East of the town collecting here and there on various vegetations and at a tiny stream. Predominantly *Coleoptera*, *Hemiptera*, *Orthoptera* etc. *Mollusca*; *Microtinae*.

5. ÇAMLIDERE, IŞIK DAĞI, 23. VI. — village in the southern piedmont of the Işık dağı — region of the pass on the road in the direction towards Ankara; mainly rocky region with isolated growths of *Pinus silvestris* L. Collecting directly in the pass after a cloud-burst of about one hour. From the alluvium were obtained by means of Motscharski's apparatus predominantly *Coleoptera* and a great quantity of terrestrial *Mollusca*.

6. BEYNAM (fig. 3), 28. VI. — village about 40 km. southwest of Ankara on the slopes of the Kuyrukçu dağı the southern spur of the Elma dağı. The slopes are from about 1200 m. sparsely covered with pine, *Pinus nigra* ARNOLD. At lower altitudes there are strong growths of wild fruit-trees. Collecting around the village at the border between steppe and forested area. Mostly by sweeping and rapping down. Collected were *Hemiptera*, *Coleoptera*, *Hymenoptera*, *Orthoptera*, *Lepidoptera* etc. Further *Mollusca* and *Vertebrata*. Aquatic insects collected in a muddy well with outflow and situated in a meadow area.

7. ANKARA-ÇANKAYA, 2. VII. — southern suburb of Ankara; collecting in orchards and ornamental gardens. Chiefly *Mollusca*; *Lepidoptera*, *Coleoptera*, *Thysanura*, *Odonata* etc.

8. ANKARA-BARAJ, 3.—4. VII. — about 10 km. north of Ankara in the area of the barrage of the Çubuk River (Ankara). Steppe

region, strongly cultivated along the river. Vineyards and orchards predominate. Collecting in small valleys perpendicular to the river, overgrown with tamarisks. Sweeping and rapping down. In the river below the barrage aquatic *Insecta* were collected. For the rest mostly *Insecta* (*Hemiptera*, *Coleoptera*, *Lepidoptera*, *Hymenoptera*, *Orthoptera* etc.), *Arachnoidea*; *Mollusca*; *Vertebrata* were collected.

9. MOĞAN GÖLÜ (fig. 2), 5., 8., 9. — 10., 12. VII. — salt lake 15 km. south of Ankara in the northern part of a tectonic depression running in a north-south direction, at an altitude of about 960 m. The eastern margin of the depression is delimited by the spurs of the Elma dağı Mts.; in the northern part of the depression accumulations of clay predominate. Steppe region with predominating growths of *Artemisia* sp. The major part of this region is cultivated, fields of cereals predominate. The lake itself is very shallow; its depth varies greatly in the different seasons, as does also its salinity (in spring 1%, in autumn 4%). The southeastern margins of the lake are stony and sandy, the southwestern part has an abundant vegetation. The northern part of the lake is swampy and strongly overgrown. Collecting in the steppe (sweeping and rapping down). Predominantly were collected *Hemiptera*, *Coleoptera*, *Orthoptera*, *Odonata*, *Lepidoptera*, *Collembola*. In the lake aquatic *Insecta*; *Pisces*; *Anura*; *Colubridae*, aquatic *Mollusca*. *Citellus*.

10. HASANOĞLAN, 13. VII. — village about 40 km. northeast of Ankara. Region with wild fruit-trees occurring at an altitude above 1000 m. Here and there remnants of oak scrub grow on the adjoining stony slopes. In larger, continuous growth oak scrub grows on the slopes towards the Kızıl Irmak, also at an altitude below 900 m. Collecting after a violent rain-storm into a net from a driving car. Chiefly *Coleoptera* (*Staphylinidae*, *Pselaphidae*), *Hemiptera*, *Diptera*, *Hymenoptera*, *Thysanoptera* etc. Terrestrial *Mollusca* were collected in the alluvium.

11. AYAS, 17. VII. — town 45 km. west of Ankara. Collecting some kilometers east of the town, in the piedmont of the Abdüsselâm dağı, in a stony, deep and narrow valley with a tiny stream at the bottom. In the valley sporadic poplars and willows. Collected were aquatic- and semi-aquatic *Heteroptera*, *Coleoptera*, *Hymenoptera*, *Thysanura* etc. *Amphipoda*; *Vermes*; *Isopoda*.

12. ANKARA, 18. VII. — collecting in the garden of the Czechoslovak Legation. Chiefly *Lepidoptera*, *Coleoptera*, *Thysanura*. *Mollusca*, *Isopoda*, *Myriapoda*, *Vertebrata* (*Erinaceus* sp.).

13. BÂLÂ, 21. VII. — town about 51 km. southeast of Ankara. Collecting in the steppe along the road west of the town. Collected were mostly *Heteroptera* and *Coleoptera* (*Zonabris*).

14. ÇAGIRGAN, 22. VII. — village north of Kırşehir. Aquatic *insects* and *Anura* collected in a gently flowing stream forming rich pools with an abundant vegetation.

15. MUCUR, 22. VII. — town about 25 km. southeast of Kırşehir, in the direction towards Kayseri. Steppe region, mostly cultivated (fields of cereals). Collecting on the landmarks and along the roads under

heaps of cut thistles. Chiefly *Carabidae* (*Tenebrionidae*, *Curculionidae*), *Hemiptera*, *Orthoptera*; *Myriopoda*. *Agammidae*.

16. ERCİYAS DAĞI (fig. 4), massif of strong relief, of an area of about 200 sq. km., the highest Inner Anatolian mountains, of volcanic origin, only with a very modest growth of sporadic oaks, juniper trees, birches and poplars mostly growing in the form of scrub. Collecting at different altitudes in the ascent from the northeast:

1800 m., 23.—24. VII. — collecting in the broad valley of a stream flowing through mountain meadows. Predominantly were collected *Coleoptera* (*Carabidae*, *Curculionidae*), *Hemiptera*, *Dermaptera*, *Diptera*; *Arachnoidae* etc. *Murinae*.

2400—2700 m., 24. VII. — collected were on the eastern slopes of the Erci yas dağı under stones and low vegetation of *Astragalus* spp.: *Carabidae*, *Curculionidae*; *Heteroptera*. *Citellus*; *Anura*.

3200 m., 25. VII. — collected were at snow fields on the southern ridges of the massif proper of the Erci yas dağı mainly *Heteroptera* and *Coleoptera* (*Halticidae* etc.). *Microtinae*.

2075 m., 26. VII. — Collected were on the plateau between Erci yas dağı and Koç dağı chiefly *Insecta* and in greater numbers *Citellus*.

2300 m., 26. VII. — Collecting on the western slopes of the Koç dağı massif under low vegetation and stones. Mainly *Insecta*. *Citellus*.

17. İNCESU, 27. VII. — village on the road from Kayseri to Niğde, about 35 km. from Kayseri. Collecting in the *Artemisia* steppe around the village and along the road to Kayseri. Collected were predominantly *Heteroptera* (*Pentatomidae*), *Orthoptera*. *Lacertidae*.

18. NİĞDE, 27. VII. — about 120 km. from Kayseri, in the southeastern part of the steppe region of the basin Konya—Tuz gölü. Under tufts of *Artemisia* sp. were collected *Lacertidae*, on stony ground *Agammidae*.

19. ULUKIŞLA, 28. VII. — village on the northern promontory of the Middle Taurus. From the south, from an altitude of about 1350 m. a growth of Cilician fir (*Abies cilicica*) mixed with evergreen oaks and *Juniperus excelsa* extends into the area of the village. The vicinity of the village is considerably cultivated and between the fields there are many wild fruit-trees. Collecting north of Ulukışla at an altitude of about 1400 m. Aquatic *Insects* (*Hemiptera*, *Coleoptera*); *Hydracarina* collected in a small well with plant detritus at the bottom. Sifting made around the well. Further collecting in the vicinity on different ruderal plants (*Coleoptera*, *Mollusca*).

20. POZANTI, 28. VII. — village at the northern mouth of the Cilician Gate (784 m.). Timbered region with predominating growth of oaks, *Pinus nigra*, *Pinus brutia* and *Abies cilicica*. Collecting nets were used in the evening dusk while driving in a car. Collected were chiefly *Coleoptera*, *Hemiptera*, *Lepidoptera*, *Diptera* and *Hymenoptera*.

21. BÜRÜCEK (fig. 5), 29. VII—31. VII. — high-level plateau (900—1000 m.) between the Bulgar dağı and Ala dağı. Plateau covered with a light, dry forest with predominantly oaks, *Pinus nigra*, *Pinus brutia*, *Abies cilicica* and *Juniperus excelsa*. Sweeping and rapping down

in the forest growth. Collected were chiefly *Hemiptera*, *Coleoptera* (*Buprestidae*, *Curculionidae*, *Coccinellidae*, *Chrysomelidae*, *Alleculidae*, *Staphylinidae*, *Ipidae*, *Meloidae*, *Tenebrionidae* etc.), *Orthoptera*, *Lepidoptera*, *Odonata*, *Isoptera*; *Arachnoidea*; *Myriopoda*; *Vermes*. In the stony stream of the deep limestone valley were collected aquatic *Insecta* and *Crustacea*; *Mollusca*. *Lacertidae*.

22. KARAPINAR, 1. VIII. — dry river-bed, about 15 km. south of the Bűrücek plateau, at an altitude of about 800 m., on the southern slope of the Middle Taurus. Rapping down on *Juniperus excelsa*, *Pinus brutia*, *Pinus nigra*, *Abies cilicica*. Chiefly *Buprestidae*, *Hemiptera*, *Curculionidae*.

23. ADANA (fig. 6), 1., 3., 5., 14., 24. VIII. — collecting around Adana, in the middle of the Çukurova lowland, between extensive fields of cotton, cereals, maize, and olive groves. Collecting along the roads and on the fallows, mostly by using a collecting net in going by car. Collected were chiefly *Hemiptera*, *Coleoptera*, *Hymenoptera*, *Diptera*. Further *Agammidae*, *Lacertidae*; *Arachnoidea*.

24. KARATAS, 2., 3., 4.—5. VIII. — village about 48 km. south of Adana. Coastal sandy region passing into steppe. *Pinus brutia* (?) occurring only sporadically. The coastal part is only sparsely covered with *Artemisia* sp., *Plantago* sp., *Astragalus* sp. Collected were chiefly *Orthoptera*, *Hemiptera* (*Tingitidae*, *Pentatomidae*), *Coleoptera* (*Tenebrionidae*, *Curculionidae*). A collecting net was used at dusk while driving in a car. Collected were predominantly *Hemiptera* (*Enicocephalidae*, *Lygaeidae*, *Cydnidae*, *Miridae* etc.), *Diptera*, *Hymenoptera*, *Coleoptera*. Further *Pisces*; *Crustacea*; *Lacertidae*; *Anura* (*Hylidae*).

25. TAŞCI, 4. VIII. — Experimental farm, about 10 km. south of Adana, on the river Seyhan. Plantation of cotton, *Ricinus* and *Cannabis*. Collecting along the river, chiefly *Hemiptera*, *Lepidoptera* (*Danaidae*), *Coleoptera*; *Arachnoidea*. Terrestrial *Mollusca* were collected in great numbers on dried plants.

26. KURTEPE, 6. VIII. — Point about 15 km. northwest of Adana. Collecting along the road on the right bank of the river Çakıt among maquis. Predominantly *Lacertidae*, on the trunks of fruit-trees *Agammidae*.

27. ABACILAR, 7. VIII. — village 20 km. northwest of Adana. Steppe region, strongly cultivated: cotton fields predominate. Along the river Çakıt clumps of oleanders. Along the highroad towards Adana numerous growths of maquis with *Quercus coccifera* predominating, in the fields scattered fruit-trees. *Insecta* (*Hemiptera*, *Coleoptera*) were collected in and along the river. On the banks and along the road *Agammidae*. At dusk a collecting net was used while driving in a car. Collected were predominantly *Hemiptera* (*Aradidae*, *Leptopodidae*, *Miridae* etc.), *Diptera*, *Coleoptera*, *Hymenoptera* etc.

28. KOZAN (fig. 7), 8.—9. VIII. — town in the northeast of the Adana Lowland, about 75 km. from Adana, at the foot of the east Eastern Taurus between the inner and the outer zone. Collecting in the valleys

of the Taurian piedmont, north of Kozan, in a densely forested (*Juniperus excelsa* and *Pinus* sp.) region mixed with scrub of oaks and beeches. Along the waters dense oleander growths. Sweeping and rapping down. Collected were predominantly *Hemiptera*, *Coleoptera*, *Diptera*, *Orthoptera*, *Lepidoptera*, *Odonata*. Terrestrial *Mollusca*. *Pisces*. *Reptilia*.

29. SULUHAN (fig. 8), 9.—12., 14. VIII. — locality about 20 km. north of Kozan, in the central mountain range of Eastern Taurus on the mountain road to Feke. Collecting in a deep longitudinal valley with predominant pine growth; bottom of the valley with many platanes, fig-trees and flowering oleanders. Collecting by rapping down. Sifting under the platanes gave a large material of *Coleoptera* (*Curculionidae*, *Staphylinidae*, *Pselaphidae* etc.), *Hemiptera* (*Aradidae*, *Lygaeidae*, *Reduviidae*). *Opiliones*; *Isopoda*. The stream in the bottom of the valley forms many rapids and pools, in which aquatic *Coleoptera* and *Hemiptera* were collected. In the mountain wells and puddles along the road were collected aquatic *Insecta*, *Crustacea* and *Mollusca*. Further *Murinae*, *Anura*. *Reptilia*.

30. FEKE, 12. VIII. — small mountain village at an altitude of 1300 m., about 65 km. north of Kozan, in the central mountain range of the Eastern Taurus. Collecting 2 km. south of the village, in the valley of the river Göksu. Valley covered predominantly with pine forest, the sandy and stony banks of the river with a dense growth of tamarisks. On the tamarisks were collected predominantly *Hemiptera* (*Reduviidae* and *Miridae*). *Lacertidae*, *Agamidae*.

31. AĞAPINARI, 13. VIII. — point about 15 km. south of Feke on the road towards Kozan. Predominant growth of *Pinus nigra* and *Pinus brutia*. Collecting under the bark of trees (*Coleoptera*) and by light trap (*Lepidoptera*, *Hemiptera*).

32. TAPAN, GYAUR DAĞLARI, 16. VIII. — point at about 900 m., in the centre of the Gyaur dağ, on the road from Osmaniye to İslahiye. The mountains have a relatively moist character because of their position far to the southeast from the Taurian system proper. On the outer limestone slopes from the west dense maquis grows up to an altitude of 900 m. Then the maquis is replaced by *Pinus brutia* mixed with evergreen oaks *Quercus ilex* and *Quercus coccifera*. The primary vegetation is very rich. Rapping down on oaks. Chiefly *Hemiptera* (*Tingitidae*), *Coleoptera*.

33. 17. VIII. — point without name on the northeast slope of the GYAUR DAĞLARI, about 12 km. west of the crossroad Fevzipaşa. Sweeping in the valley of the stream along the fields, predominantly *Hemiptera*, *Coleoptera*, *Orthoptera*, *Odonata*, *Lepidoptera* etc. In the stony and swampy area with swamp vegetation at the river head were collected *Hemiptera*, *Thysanura*; *Vermes*; *Mollusca*.

34. SAKÇAGÖZÜ, 17. VIII. — village about 30 km. northwest of Fevzipaşa. Steppe region with sporadic islands of *Quercus coccifera* growths. Collected by the light trap: *Lepidoptera*, *Coleoptera*, *Hemiptera*.

35. GAZİANTEP (fig. 9), 18. VIII. — town on a steppe plateau 600 m. high. Region belonging in general to the domain of natural forest with natural steppe islands. Very strongly cultivated area; besides dense scrub of the evergreen *Quercus coccifera*. Collecting about 5 km. south of the town along the vineyards. Chiefly *Heteroptera* and *Orthoptera*. *Lacertidae*; *Agammidae*.

36. KİLİS, 20. VIII. — town about 55 km. southwest of Gaziantep, almost on the Syrian frontier. Region about 700 m. above sea-level with cultivated olive forests reaching their lower limit below 600 m. The whole region belongs to the domain of natural forests with natural steppe islands — the steppe parts having forest islands. Aquatic *Insecta* collected in a deep limestone gorge. *Anura*. *Pisces*.

37. AFRİN River, 20. VIII. — south of the village of Musabeyli. Aquatic insects collected in the stony and sandy bed of the river flowing through steppes with scattered growth of maquis. *Anura*. *Pisces*.

38. ALACAKİLİSE, 21. VIII. — small village, about 40 km. northwest of Kilis. Region belonging to the domain of natural forest. Traces of forest reach their lower limit around 500 m. Dense maquis with *Quercus coccifera* and *Q. ilex* and pines. In the half dried out stream were collected aquatic *Insecta*. *Colubridae*; *Agammidae*.

39. MİSİS, 22. VIII. — town on the river Ceyhan, about 25 km. east of Adana. Strongly cultivated region with predominating plantations of cotton and scattered fig-trees and date-palms. Collecting by collecting net while driving in a car. Chiefly *Hemiptera*. *Coleoptera*, *Hymenoptera*, *Diptera* etc.

40. MERSİN, 24.—25. VIII. — harbour town on the coast of the Mediterranean. Collecting west of the town in a sandy region with sporadic *Pinus brutia* and St. John's bread. Aquatic insects collected in a brackish pool about 2 m. from the surf zone of the sea. In sandy and stony terrain were collected *Lacertidae*; *Anura* (*Bufo*nidae). Terrestrial *Mollusca*.

41. ALATA, 26. VIII. — village about 10 km. to the southwest of Mersin. Strongly cultivated region with large orchards and extensive banana plantations. The natural growth is formed by Mediterranean maquis of *Arbutus* sp., *Quercus coccifera*, wild olives, myrtle, *Erica arborea*, *Buxus sempervirens*, St. John's bread and scattered trees of *Pinus brutia*. On the road in the direction towards Erdemli in the evening dusk a collecting net was used while driving in a car. Collected were predominantly *Diptera*, *Hemiptera*, *Coleoptera* etc.

42. ERDEMLİ (fig. 10), 26.—27. VIII. — village about 45 km. southwest from Mersin, with the same biotop as around Alata. Aquatic insects collected in a slightly swampy brackish pool on the stony sea coast.

43. SİLİFKE, 28. VIII. — about 10 km. north of the town collecting on the forested (*Pinus brutia*) southern slopes of the Middle Taurus. On the stony terrain was caught *Agamma* sp.

44. ALAHAN, 29. VIII. — mountain village in the Middle Taurus, 35 km. northwest of Silifke, above the valley of the Göksu river,

about 900 m. above sea level. Forested region with *Juniperus excelsa*, *Juniperus foetissima*, *Pinus silvestris* and *Pinus nigra*. *Insecta*; *Vermes* and *Mollusca* were collected under stones around a mountain spring forming a swamp covered with *Carex* sp.

45. YENİKÖY, 30. VIII. — village on the northern slopes of the Middle Taurus between Mut and Karaman, at an altitude of about 1000 m. Sparse growth of *Juniperus excelsa*, *J. foetissima*, *Pinus silvestris* and *P. nigra*. Collecting along a small stream. *Coleoptera*, *Hemiptera*; *Mollusca*; *Vermes*.

46. KONYA, 31. VIII.—1. IX. — town on the southern margin of the Inner Anatolian steppe region. Collecting southeast of the town in *Artemisia* and grass steppe along the irrigation canals. Collected were *Hemiptera*, *Orthoptera*, *Coleoptera*, *Odonata* etc. Aquatic insects were collected in an irrigation canal.

47. KIZILVİRAN, 2. IX. — village about 55 km. west of Konya. Collecting north of the village on the southern slope of the Ala dağ Mts. between remnants of forest (*Pinus nigra* and oaks) and in the neighbourhood of a mountain spring led into a stone trough for watering cattle. Collected were aquatic *Insecta*; *Mollusca* and *Anura*.

48. BEYŞEHİR GÖLÜ, 3. IX. — fresh water lake situated 1160 m. above sea level, with a water surface of 650 sq. km., about 80 km. west of Konya. Collecting on the eastern and northeastern, stony and sandy shores, here and there overgrown with reed. Collected were *Mollusca*; aquatic *Insecta*; *Vermes*; *Crustacea*; *Anura* (*Hylidae*); *Lacertidae*.

49. SULTAN DAĞLARI, 4. IX. — collecting in the centre of the mountains above the upper limit of forest growth, in the pass on the road crossing the mountains south of Akşehir. A small material of *Coleoptera*, *Hemiptera* etc. was collected.

50. AKŞEHİR GÖLÜ, 4. IX. — swampy lake without outlet, with slightly salty water, with an area of about 110 sq. km., at an altitude of 970 m. Collecting on the low shore densely covered with reed. On dry mud were collected *Hemiptera*, a greater number of species of small *Carabidae*. *Mollusca*; *Anura*.

51. İŞAKLI, 5. IX. — village 25 km. northwest of Akşehir. Collecting in grassy terrain under stones between sporadic willows. Collected were *Isopoda*; *Mollusca* *terrestrica*; *Hemiptera* and *Coleoptera*. In the broad, densely overgrown stream running from the south into the lake Eber gölü were collected aquatic *Hemiptera* and *Coleoptera*. *Anura*.

52. KURUDERE, EMİR DAĞLARI (fig. 11), 6. IX. — mountains north of the lake Eber gölü. Collecting in the central parts of the mountains unfar the village of Kurudere. Stony region with sporadic growths of juniper trees. Under stones were collected *Heteroptera* (*Cydnidae*, *Lygaeidae*), *Coleoptera* (*Tenebrionidae*, *Carabidae*); *Diplopoda*; *Myriopoda*; *Isopoda*. *Lacertidae*.

53. SİVRİHİSAR, 7. IX. — town 130 km. southwest of Ankara.

Collecting in swampy terrain, chiefly *Hemiptera*, *Coleoptera*; *Crustacea*; *Mollusca*; *Vermes*.

54. KIZILCAHAMAM, 14. IX. — andesitic high-level plain, about 60 km. north of Ankara, with typical continental growth of *Pinus nigra* and *Abies bornmülleriana*. Collected were *Insecta* and *Mollusca*.

55. NALLIHAN (fig. 12), 17. IX. — town 140 km. west of Ankara. Collecting east of the town on the border between steppe and mixed growth of oaks and juniper-trees, which in this region of the Sakarya River descends below the limit of 700 m. Collected were *Mollusca*.



Fig. 1. Region of Kaynaşlı in Bolu dağları (cca 1.100m) — view to north. Photograph taken June 21st, 47.



Fig. 2. Steppe region of Moğan gölü (cca 960 m) — view from the southwest part of lake to southeast in the tectonic depression. Photograph taken July 10th, 47.



Fig. 3. Kuyrukçu dağı, region near the village Beynam — view to south. Photograph taken June 26th, 47.



Fig. 4. Erciyas dağı, central region (cca 2500 m) — view to the west upwards to the top.
Photograph taken July 24th, 47.

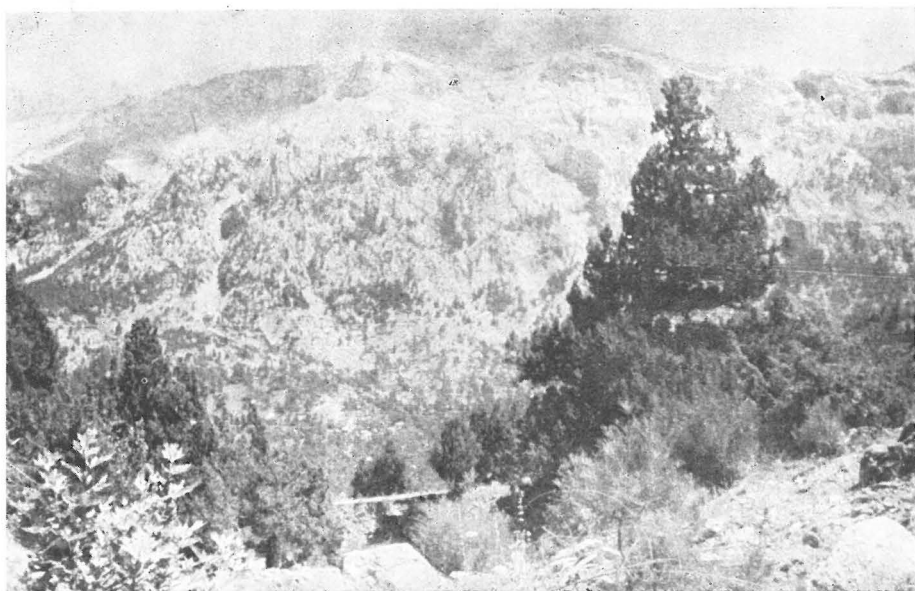


Fig. 5. Plateau Bürücek between Bulgar dağları and Ala dağ — view to the east. Photograph taken July 30th, 47.

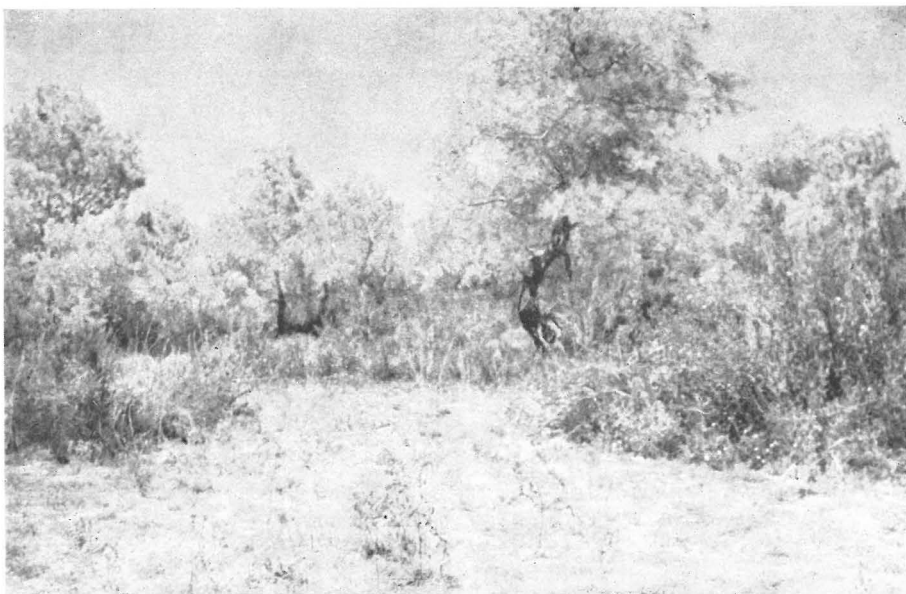


Fig. 6. Region 10 km NE of Adana with growths of maquis with *Quercus coccifera*, *Pinus brutia* and wild olives. Photograph taken August 5th, 47.



Fig. 7. Region 6 km NE of Kozan — East Taurus valley forested with *Juniperus excelsa*, *Pinus* sp. and scrub of oaks and beeches. View to the northeast. Photograph taken August 9th, 47.



Fig. 8. Suluhan — valley of central mountain range of East Taurus with predominant pine growth, platanes, fig-trees and oleanders. View to the south. Photograph taken August 12th, 47.

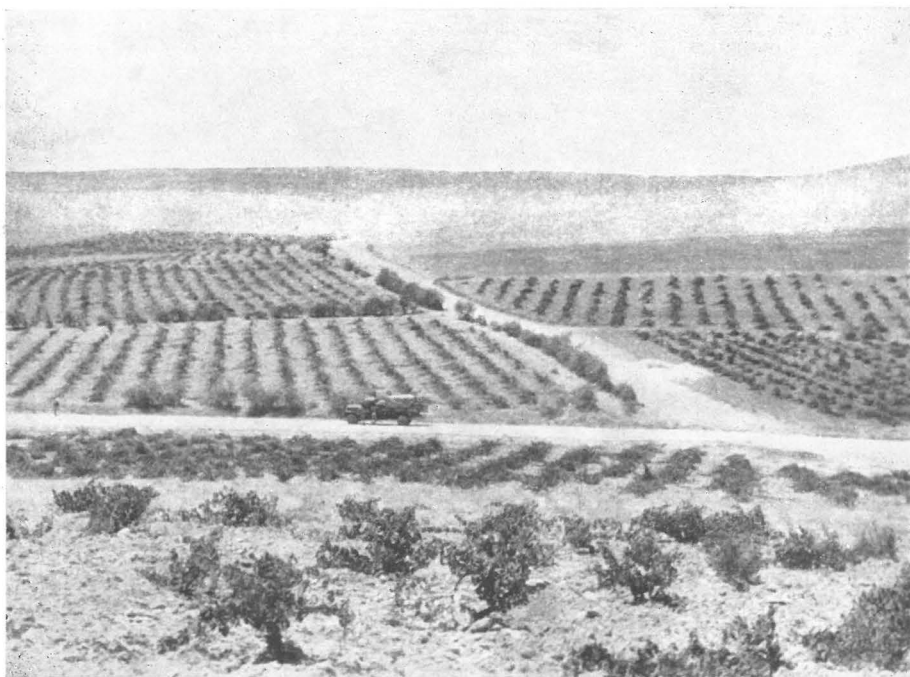


Fig. 9. Steppe plateau (cca 600 m) with vineyards, 5 km south of Gaziantep — view to the west. Photograph taken August 18th, 47.



Fig. 10. Erdemli, wadi — Alata çay. View to the north (Middle Taurus). Photograph taken August 26th, 47.



Fig. 11. Emir dağları, region near Kurudere. View to east. Photograph taken September 6th, 47.

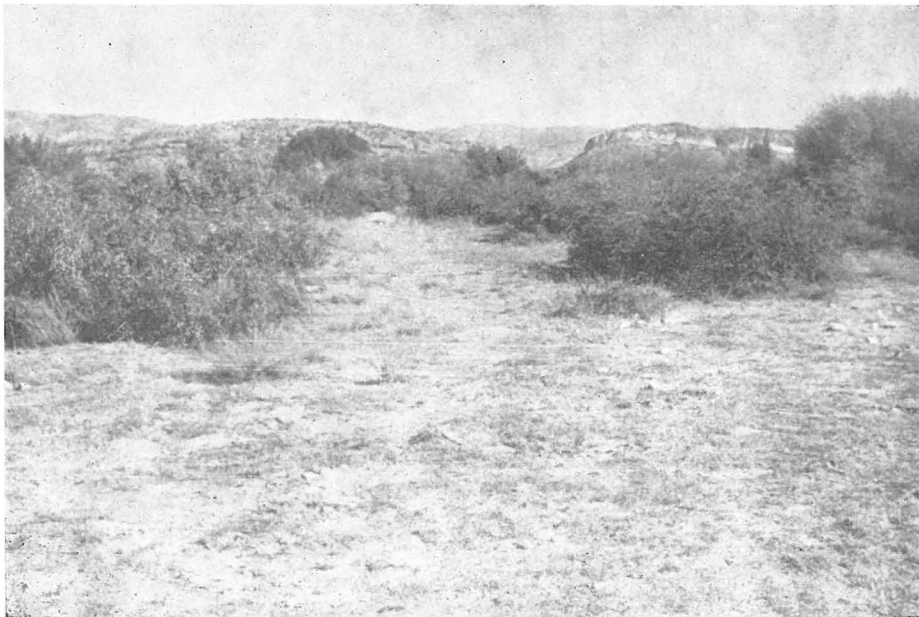


Fig. 12. Nallıhan, region east of the town, border of the steppe and mixed growth of oaks and juniper-trees. Photograph taken September 17th, 47.

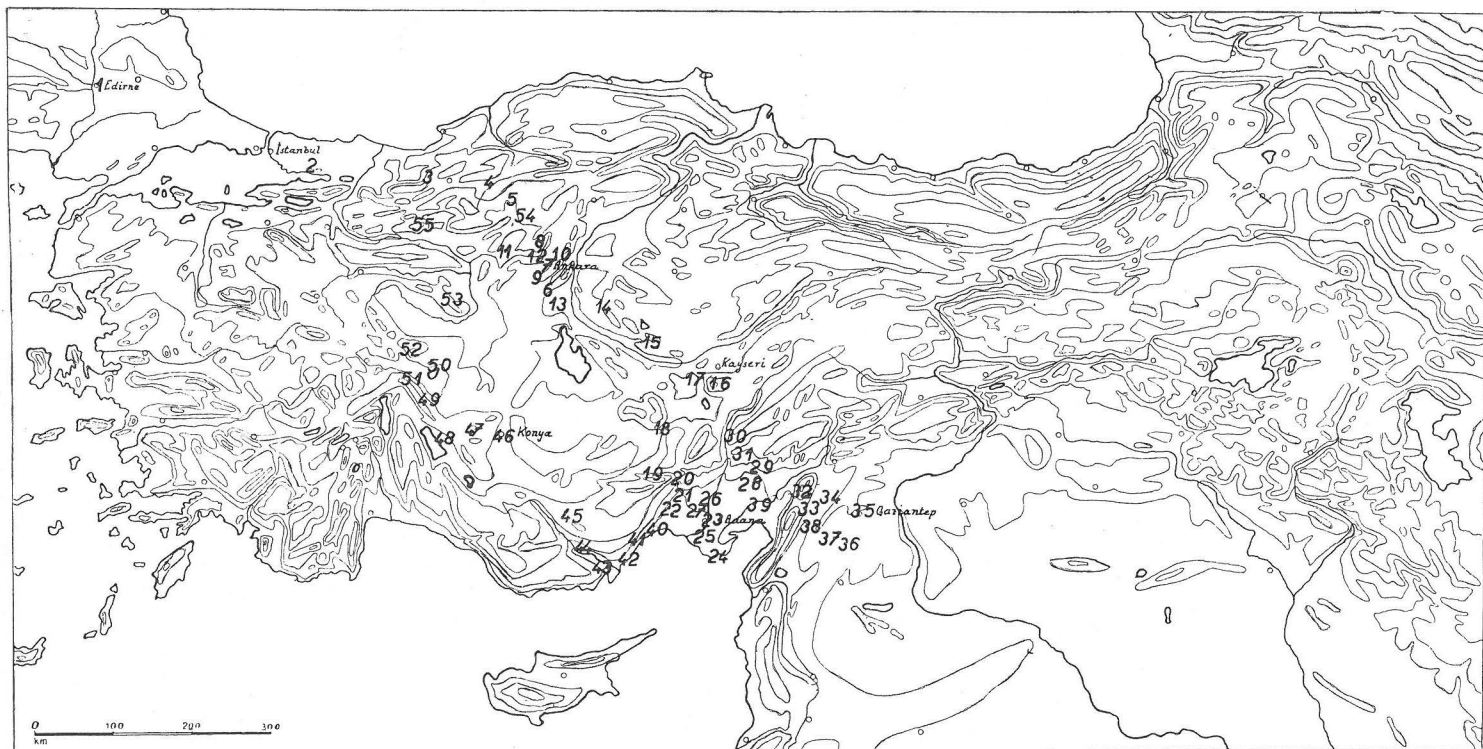


Fig. 13. The map of Turkey, showing the collecting stations of the expedition. The numbers in the map correspond to the numbers in the list.