THE TURKISH COLLECTIONS OF PAUL SINTENIS

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One of the main problems confronting the worker on the Flora of Turkey is that of accurately localising the places whose names are given on the labels of the specimens with which he is working. This problem is particularly acute with the specimens of the older collectors because of the very numerous name changes which have taken place in Turkey over the last century. Davis (1958) has prepared a paper which has elucidated much of the confusion due to the use of classical and old Turkish names, but much still remains to be done. The present contribution is an attempt to work out the collecting localities of the German collector, Paul Sintenis, who collected a great deal of material in Turkey; specimens from his collections are widely distributed through the major European herbaria. A few biographical notes are also given, as information about Sintenis is scattered through the pages of many journals and publications, and seems never to have been brought together in one place.

Paul Emil Ernst Sintenis was born on June 4th 1847, at Seidenburg in Prussia, the eldest son of an army doctor. He studied pharmacology at the Gymnasium in Görlitz, and later at Breslau. His first expedition, to the Dobrudia in 1872-1876, was mainly devoted to the collection of birds and mammals, though some plants were also collected. Then followed a whole series of expeditions which were mainly botanical:-1880 to Cyprus, in company with G. Rigo; 1881 to Istria, Dalmatia and North Italy: 1883 to the Troad: 1884-1887 to Puerto Rico: 1888 to Syria and Kurdistan; 1889 and 1890 to Armenia; 1891 to Macedonia, Thessaly and Thasos, in company with J. Bornmüller; 1892 to Paphlagonia; 1894 to Armenia and the Pontus; 1896 to Greece; 1900-1901 to Iran. He died at Kupferberg in Silesia on March 6th 1907. His own personal herbarium was given to the Botanic Garden at Görlitz, but was later acquired by the herbarium of the University at Lund. (Sources for biographical information: Urban, I., Symbolae Florae Antillanae, 3, 127-130; 1902, an account based on information given to Urban by Sintenis himself; and the 'Personalnachrichten' sections of such periodicals as the Österreichische Botanische Zeitschrift).

The important Turkish collections are thus those of the years 1883, 1889, 1890, 1892 and 1894. Of these, the first, made under the aegis of P. Ascherson, who had just assisted in the preparation of the section devoted to the plants of Troy for Schliemann's Ilios (1880), is not treated here, because it has proved impossible to accumulate sufficient data, there being no published enumeration of the specimens collected on this expedition.

The method used in the preparation of the itineraries and gazetteer was as follows: information was accumulated, comprising the date, number and locality for as many of the relevant specimens as possible. This information was obtained from three sources:— a) from the specimens

themselves, as represented in the herbarium of the Royal Botanic Gardens, Edinburgh; b) from papers and revisions in which Sintenis' specimens are frequently cited (mainy Bornmüller, 1936-41 and Freyn, 1893, 1894, 1895 and 1896); and c) from four of Sintenis' own herbarium notebooks, which were made available by Dr. S. Snogerup, Director of the Botanical Museum and Herbarium. Lund.

The information thus obtained was then arranged in order of date. In this way the itineraries could be constructed, and notes made of various localities visited on the same date. A further detail of interest discovered from this study was that Sintenis' collection numbers are not strictly serial; he seems to have collected plants for a number of days at a time, arranged them in systematic order, and then numbered them. As far as the Turkish collections are concerned, he began numbering from 1 three times, in 1883, 1888 and 1889; from 1889 to 1894 the numbers form a more or less continuous series. Specimens should therefore be cited with both the year and the number.

The place names were then sought systematically on maps of various scales and ages, of which the following proved most useful: The Times Atlas, vol. 2 (1959); Prof. F. S. Duran's Büyük Atlas (Istanbul, undated); the map in vol. 1 of Jaubert & Spach's Ilhustrationes Plantarum Orientalum (1842); the map in the last volume (Atlas) of Tchinatcheff's Asie Mineue (1866); the series of maps of scale 1: 500,000 issued by Harta Genel Müdürlüği: (1946); and the series of maps of scale 1:200,000 issued by Hort War Office (1943–44). The published results of the Turkish census of 1935, Genel Nüfus Sayimi (1937), also proved useful. In this way the names were either localised accurately, in which case they are given in the gazetteer with a longitude/latitude co-ordinate (obtained from the gazetteer of the Times Atlas, vol. 2), or with a definite distance and direction from a place so localised; places which could not be found on any of the maps could be localised to some extent, as near a place of known situation visited on the same day.

It is not claimed that the gazetteer and itineraries given here are fully complete or completely accurate; but it is thought that even in their present imperfect state they may be of use to students of the Turkish Flora and to phytogeographers interested in the flora of the Eastern Mediterranear.

ITINERARIES

1888: Sintenis must have arrived at Mersin towards the end of February, as the earliest collection seen was made at the ruins of Soli on February 21st. On the 25th he collected at Iskenderun, where he remained until at least the 4th of March. On March 8th he collected near Aleppo in Syria. During the third or fourth week of March he reached Birecik, and collected in and around Birecik until about June 14th. On the 20th of June collections were made at Nemrutdag and Çermelik; on the 23rd at Uetsch Kara (Üç Kara), and on the 25th at Tel Pinar (neither located); on the 26th at Karacadağ, and on the 29th at Diyarbakir. On or about the 31st he arrived at Mardin, and continued collecting there until about the end of July. He then retraced his steps, collecting at Diyarbakir on August 11th and between Siverek and Birecik on the 15th, Presumably he



Map of Sintenis' itineraries of 1888, 1889, & 1892.

I-Mersin; 2-Iskenderun; 3-Aleppo; 4-Birecik; 5-Çermelik; 6-Nemrutdağ; 7-Siverek; 8-Diyarbakir; 9-Mardin; 10-Inebolu; 11-Küre; 12-Kastamonu; 13-Toya; 14-Trabzon; 15-Gümüşane; 16-Keban; 17-Harput; 18-Arapkir; 19-Kemaliye; 20-Kuruçay; 21-Erzincan. The itinerary of 1890, using the above numbers, runs 14-15-19-20-21-15-14.

left from Iskenderun or Mersin shortly after this date. The numbering of the specimens from this expedition runs from 1 to at least 1464.

IS89: Sintenis arrived at Trabzon at the beginning of April; the earliest collection noted was made on April 15th, between Torul and Beskilise. From here, Sintenis travelled to Harput, where he arrived in early May, having passed through Keban. Collections were made in the Harput area until June 20th. From Harput he travelled to the Sipikor Dag, north of Erzincan, passing through Kemaliye (26th May), Kuruçay (27th), and Erzincan, arriving on June 37th. He remained at Sipikor Dag, until about the middle of July, and then travelled north, collecting at Torul (July 19th), Zigana Dag (20th), Trabzon (24th and 25th), Sumila* (30th July 10th), Trabzon (24th and 25th), Sumila* (30th July 10th), Trabzon (24th and 25th), Sumila* (30th July 10th), Trabzon (25th), Tr

1890: In this expedition Sintenis covered much the same ground as in 1889, but concentrated on Kemaliye. The earliest date noted is 25th April, when collections were made at Trabzon. On the 29th collections were made at Zigana Dağ, and on May 10th he arrived at Kemaliye, having passed through Chama, a locality which has not been found, but which, from the evidence on the specimen labels, is on the Euphrates,

*A ruined monastery, also visited by E. K. Balls in 1934, and appearing on his labels as 'Miriamana Monastery'. between Erzincan and Kemalive. Collecting continued in the vicinity of Kemaliye until about July 5th. On July 14th collections were made at Kurucay: on the 16th at Chama; on the 23rd he arrived at Sikipor Dag, and made collections on this range until about August 12th. On August 20th he collected at Köse Dağ. The specimen numbers run from c. 2069 to c. 3492.

1892: Sintenis must have arrived at Inebolu towards the end of April, as the first collections noted were made there on the 30th. From Inebolu he travelled to Kastamonu, passing through Küre on the 3rd-5th of May. On May 7th he arrived at Tosya, and collected there until about August 9th. He then returned to Inebolu, collecting at Kastamonu (15th) and Küre (25th to 5th September). The specimen numbers run from 3660 to 5349

1894: On this expedition Sintenis concentrated on the mountains around Gümüşane, which he reached and left via Trabzon. The specimens are numbered from 5400 to 7679.

GAZETTEER

The following information is given; name of locality as spelled by Sintenis; year or years of visit; modern name or spelling when known, and if different from Sintenis' version; geographical situation, in degrees and minutes where necessary; modern vilayet, using the following abbreviations-A-Adiyaman; C-Çankiri; D-Diyarbakir; E-Elaziğ; Er-Erzincan; G-Gaziantep; Gu-Gümüşane; H-Hatay; I-Içel; K-Kastamonu; M-Malatya; Ma-Mardin; T-Trabzon; U-Urfa. S is used to indicate the few Syrian localities. One or two places not visited by Sintenis, but serving as useful reference points, are also given.

> near Erzincan, Er. Ergü, 8 km. SE. of Kemaliye, Er.

near Aleppo, S.

near Sorda, Gu.

hill near Ilva Dağ, Gu.

36°14′ N., 37°10′ E., S. Iskenderun, 36°37' N., 36°8' E., H.

Abschaga (1890) Abuschik (1889, 1890) Aergu (1890) Afrin (1888) Aghakoi (1894) Ak Tasch (1894) Aleppo (1888) Alexandretta (1888) Altikoi (1890) Arapkir (1889) Ardas (1889, 1894) Ärgubaschi (1890) Argyridagh (1894) Artabir (1894) Auschin (1890)

Aymene Bogaz (1894) Bagirbaschi (1890) Baraskiwa (1894)

Basben (1894)

near Kemaliye, Er. 39°3′ N., 38°29′ E., M. Torul, 40°35' N., 39°18' E., Gu. Aergu, see above. mountain near Ilya Dağ, Gu. Ertabil, 30 km. WSW. of Gümüşane, Avşin, 37 km. NE. of Kemaliye, Er. near Ilya Dağ, Gu. near Kemalive, Er. Baraskuva, 7 km. SSE, of Gümüsane.

Bazbend, 12 km. N. of Gümüşane, Gu.

Akpcaga, 4 km. SSE of Kemalive, Er.

see Schakirlar

SE. of Tosya, K.

Bayana (1894) Bealdasdagh (1894) Bellowa (1892) Bendola (1890) Beschklissa (1894) Biredjik (1888) Buyuk (1894) Buyuk Ilkas Dagh (1892) 17 km. WSW. of Gümüşane, Gu. ? cf. Moaldasdagh on Guiar dagh, near Tosya, K. on Sipikor Dağ, Er. Beşkilise, 7 km. NW. of Gümüşane, Gu. Birecik, 37°3′ N., 37°59′ E. U. probably Ertabildere (see Artabir). Gu. E. part of Ilgaz Dağ, K.

Çakirlar (1892) Chakaxa (1894) Chama (1889, 1890) Charawak (1894) Chromdagh (1894) Cigana Dagh (1889, 1890, 1894)

between Erzincan & Kemaliye, Er. ?
peak near Istavros, Gu.
Zigana Dağ, range 17 km. N. of
Gümüsane. T/Gu.

Cinonbaba (1892)

Dalscha Dagh (1892) Darsos Dagh (1894) Dawrende (1892) Denisili (1889) Devrektschai (1892) Devreschi Chan (1894) Diachbet (1890) Diarbekr (1888) Dibisi Goell (1894) Dikmen (1892) Djebel Taken (1888) Dranova (1894) near Çakirlar, K.
mountain near Sorda, Gu.
on Kücük Ilgaz Dağ, K.
Denizli, 7 km. NW. of Keban, E.
Devres çai, river, S. of Tosya, K.
near Sorda, Gu.
near Auschin, Er.
Diyarbakir, 37°55' N., 40°14' E., D.
lake on Ilya Dağ, Gu.
7 km. SE. of Tosya, K.
near Birecik, G. or U.
on Moaldasdağıh, Gu.

Egin (1889, 1890) Ekinschik (1892) Ekrek Dagh (1890) Elaziğ Eliot (1892) Elias Dagh (1894) Kemaliye, 39°16′ N., 38°29′ E., Er. Ekincik, 7-5 km. NNE. of Tosya, K. peak of Murzur Dağ, Er. 38°41′ N., 39°14′ E., E. near Taschlik, K. Ilya Dağ, 12-5 km. SW. of Gümüşane, Gu. near Kizilcaağil, K.

Erzisler, 5 km. NNE. of Küre, K.

Elmalu Dagh (1892) Enzisler Kajari (1892) Erschewit (1892) Ertabil Erzinghan (1889, 1890) Erzuruk (1889)

Erçewit, 3 km. S. of Küre, K. see Artabir.

Erzincan, 39°44′ N., 39°14′ E., Er. Erzülük, 13 km. WNW. of Elaziğ, E. near Küre, K.

Eudemisch (1892) Faltibaschi (1890)

?

Garbaschi (1890) Gemergöp Godena (1894) Goekcewis (1892) near Kemaliye, Er. see Kemerkoep. near Bazbend, Gu. Gökçeoz, 9 km. NE. of Tosya, K. Guans (1894)
Guiardagh* (1892)
Guiardagh* (1892)
Guiardagh* (1894)
Gumuschkhane (1889, 1894)
Gumuschair (1889)
Haman (1888)
Hamskoei (1889, 1894)
Haschnadi (1888)
Hassanova (1889, 1890)
Hochadur Dagh (1890)
Hossek (1889)
Ibras (1892)
Ibras (1892)

Ilya Dağ Ineboli (1892) Iskenderun Istavros (1889, 1894) Jailabaschi (1890) Jamurdere (1894) Jarbaschi (1889) Jerbatan (1890) J(Y)ocaridagh (1890)

Ilkas Dagh (1892)

Kadi Oghlu Chan (1892) Kāhta Kainardagh (1889) Kainartschar (1890) Kaisirdere (1890) Kaiseridere (1892) Kala'at Marra (1888) Kaldirimdagh (1894) Karabandagh (1894) Karabircik (1892) Karackiuri (1890) Karader (1892) Karadja Dagh (1888)

Karagoelldagh (1894)

Karagöl Dağ Karahissartasch (1894) Karamalikos (1894) Karatasch (1889) Kasmi (1888) Kastamboli (1892) near Sobran, Gu. Gavur Dağ, 7-5 km. NW. of Tosya, K. part of Karagöl Dağ, Gu. Gümüşane, 40°29' N., 39°26' E., Gu. Güneyçayiri, 10 km. ENE. of Elaziğ, E.

near Aleppo, S. Hamsiköy, 40 km. SSW. of Trabzon, T. near Birecik, G. or U. near Kuruçay, Er. part of Sernek Dağ, near Gemergöp, Er.

Hersenk, 10 km. N. of Elaziğ, E. Ebros, 3 km. S. of Inebolu, K. see Ilkas Dagh. Ilgaz Dağ, range c. 20 km. WNW. to N. of Tosya, C/K.

see Elias Dag. Inebolu, 41°57′ N., 35°45′ E., K. see Alexandretta. 17 km. N. of Gümüşane, Gu.

near Kemaliye, Er. probably Sobrandere (see Sobran), Gu. near Kemaliye Er., (?=Garbaschi). on Sipikor Dağ, Er. probably part of Harmacik Dağ, near

Sandik, Er.

near Taschlik, K.
3748' N. 38'35' E. A.
near Arapkir, M.
near Sandik, Er.
valley on Sipikordağ, Er.
valley 7 km. NE. of Tosya, K.
Kaletmara, 4 km. E. of Mardin, Ma.
mountain near Ilya Dağ, Gu.
range 40-45 km. S. of Trabzon. T.

near Kösen, K. near Aergu, Er. valley on Kücük Ilgaz Dağ, K. Karaca Dağ, range 45 km. ESE. of Siverek, U.

Karagöl Dağ, range 30 km. WSW. of Gümüşane, Gu. see Karagoelldagh. hill near Ilya Dağ, Gu. near Ertabil, Gu.

Karataş, hill 5 km. W. of Elaziğ, E. Kesme, 32 km. ESE. of Biredjik, U. Kastamonu, 41°22′ N., 33°47′ E., K.

^{*} Not to be confused with Guiardagh (Gavur Dağlari), which is part of the Amanus mountains in vilayet Hatay.

Kawak Chesme (1892) Keban Maden (1889) Kechi Chanlar (1894) Kechi Kale (1894)

Kefre (1888) Kekan (1889) Kemaliye Kemerkoep (1890) Khainiki (1888)

Kharput (1889) Khurs (Khaous) (1888) Kirkgoesbaschi (1890) Kirkgoesdagh (1890)

Kirkpauli (1894) Kisilkoi (1894) Kisiltepe (1889) Kizilcaa ğil Kiziltscha (1892)

Koese Dagh (1889, 1890, 1894)

Koesen (1892) Kota (1890) Kolat Dagh (1889, 1894) Kucuk Goell (1894) Kucuk Ilkas Dagh (1892) Kupribaschi (1894) Kurdomer (1894)

Küre Küre-Nahas (1892) Kursul (1894) Kurutschai (1889, 1890) Kusentchair (1892)

Kyl Maghara Dagh (1890) Kyran (1892)

Manator (1894) Mardin (1888) Mabaratchik (1894)

Mawrangeli (1894) Mersin (1888) Mezra (1888) Miaden (1889)

Moaldasdagh (1894)

Molirva-Meschere (1894)

Monastir* (1894)

near Kösen, K. Keban, 38°48' N., 38°45' E., E. Keci Can, near Keci Kale, Gu.

Keci Kale, 22.5 km. ESE. of Gümüşane, Gu.

Kefrik, 22 km. SW. of Biredjik, G. near Mürüdü, E.

see Egin. Gemergöp, 4 km. ESE. of Kemaliye, Er.

Harput, 4 km. N. of Elazig, E. Kavs, 12 km. S. of Mardin, Ma. near Kemaliye, Er.

near Kemalive, Er. near Venk, Gu.

Kizilkoi, 2km. NNE. of Gümüşane., Gu. Kizildağ, 9-10 km. N. of Elaziğ, E. see Kiziltscha.

Kizilcaağil, 17.5 km. SSE. of Tosva, K.

Köse Dağ, 20 km. ESE. of Gümüşane, Kösen, 5 km. ESE. of Tosya, K.

near Sandik, Er. 17 km. NNE. of Gümüşane, Gu. lake on Karagöl Dağ, Gu.

W. part of Ilgaz Dağ, K/C. Kibribasi, 1 km. S. of Torul, Gu. near Ilya Dağ, Gu.

see Küre-Nahas. Küre, 41°48' N., 33°44' E., K. near Sorda, Gu.

Kuruçay, 39°39' N., 38°31' E., Er. near Kemaliye, Er.

on Ilgaz Dağ, K. Manadur, peak of Karagöl Dağ, Gu. 37°19' N., 40°43' E., Ma.

Mabaracik, c. 15 km. SSW. of Trabzon,

6 km. SSE. of Gümüşane, Gu. 36°43′ N., 34°37′ E., I.

Mezrea, 40 km. WSW. of Biredjik, G. Miyadin, 18 km. NNW. of Elaziğ or 7 km. S. of Elazig, E.

or Maghaldas Dağ, 7.5 km. SSE. of Gümüsane, Gu. near Sorda, Gu.

10 km. SW. of Gümüsane, Gu.

^{*} One of several places of this name near Gümüşane; the one given fits in best with the other localities visited on the same day.

Munzur Dağ Muradsu (1889)

Nebenissnas (1894) Nerieskep (1890)

Nimrud Dagh (1888) Omer Agha (1888) Orum Serai (1889) Pekinik (1889)

Peschklissa (1889) Pertschin Dagh (1892)

Rakesa (1894) Rischemil (1888) Rum Kala'a (1888) Ruphena (1894)

Sabadja (1892) Salachlu (1890) Sandik (1890)

Sandik (1890) Santa Barbara (1889)

Sarek (1889) Scalita (1889) Schadachlar (1894) Schakirlar (1892) Schalgan (1894) Schersch Dere (1892) Schersch Oghlu (1892)

Schuschnas (1889) Seidler (1892)

Seitun Bagtsche (1888) Seke (1892) Senar (1888)

Servlübnar (1889) Sipikor Dagh (1889, 1890)

Siverek
Sobran (1894)
Soli (1888)
Sorda (1894)
Stadodopi (1894)
Suffer (1892)
Sumila (1889)
Sürek (1890)
Suvereck (1880)
Sza Dagh (1890)
Szanduk (1890)
Szanduk (1890)
Szanduk (1890)

Taltaban (1894)

Range E. of Kemaliye. Mürüdü, 6 km. NNW. of Elaziğ, E.

on Karagöldağ, Gu. near Kuruçay, Er.

Nemrutdağ, hill 5 km. N. of Kâhta, A.

near Diyarbakir, D. on Sipikor Dağ, Er.

10 km. ENE. of Elaziğ, E. Beşkilise, 7 km. NW. of Gümüşane, Gu.

Perçin, 10 km. NW. of Tosya, K.

?

Rişmil, 11 km. NE. of Mardin, Ma. Halfeti, 25 km. NNW. of Birecik, U. ? Zufne, 3 km. NE. of Gümüşane, Gu.

Sapaca, 6 km. ESE. of Tosya, K. Salihli, 10 km. N. of Kemaliye, Er. see Szanduk.

monastery immediatley below Sumila,

ou.
near Erzincan, Er.
near Sumila, Gu.
on Karagöl Dağ, Gu.
Cakirlar, 17-5 km: SE. of Tosya, K.

Çakırlar, 17-5 km. SE. of on Karagöl Dağ, Gu. near Kösen, K. near Kösen, K.

Şuşnaz, 11 km. NNE. of Elaziğ, E. near Küre, K.

near Birecik, G. or U. near Kizilcaağil, K.

Sinnare, 32 km. SW. of Mardin, Ma. near Elaziğ, E.

Sipikor Dağ, range 15 km. NNE. of Erzincan, Er.

see Suvereck. 17-5 km. ESE. of Gümüşane, Gu. Pompeiopolis, ruins at Mersin, I. Surda, 5 km. SE. of Gümüşane, Gu.

near Ilya Dağ, Gu.

Sofular, 11 km. ESE. of Tosya, K. Sumelas, 40-45 km. S. of Trabzon, T. near Erzincan, Er. (cf. Sarek). Siverek, 37°46′ N., 39°19′ E., U.

part of Sipikor Dağ, Er. Sandik, 4 km, NNW, of Kemaliye, Er.

near Kösen, K.

Daltaban, 2.5 km. NE. of Gümüşane, Gu. Taschlik Chan (1892) Taslik, 17.5 km, NW, of Kastamonu, K. Tat Ain (1888) near Birediik G or U. Tekke, 10 km. ESE, of Gümüsane, Gu. Teke (1889, 1894) Tel Pinar (1888) between Kâhta & Siverek, A or U. Tenbeda, 7.5 km, W. of Gümüsane, Gu. Tempede (1894) near Kiire, K. Topsichan (1892) Torul see Ardas Tossia (1892) Tosva, 41°2' N., 34°2' E., K. Tosva see Tossia. Trapezunt (1889, 1890, 1894) Trabzon, 41° N., 39°43' E., T. Trello Giorgios (1894) Cermelik, 37 km. E. of Birediik, U. Tschermalik (1888) Tschepni-Gecerdi (1892) Cepni, 12.5 km. SSW. of Tosya, K. near Birecik, G or U. Tschiftlik (1888)

 Turbe (1892)
 near Küre, K.

 Ücgös (1890)
 near Kemaliye, Er.

 Uelle (1889)
 near Elaziğ, E.

 Uetsch Kara (1888)
 between Kåhta & Siverek, A or U.

Varenidağ (1894) near Istavros, Gu. Venk see Wang.

Utschulukdere (1892)

Wang (1894) Venk, 17.5 km. S. of Gümüşane, Gu. Witeschmedbaba (1889) ?

on Guiardağ, above Tosva, K.

Yailabaschi (1894) on Ilya Dağ, Gu. Yocaridagh (1890) see Jocaridagh.

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