

# Karl Georg Theodor Kotschy's itinerary in southern Iran, 1841–42

Authors: Edmondson, John R., and Lack, H. Walter

Source: Willdenowia, 36(1): 579-588

Published By: Botanic Garden and Botanical Museum Berlin (BGBM)

URL: https://doi.org/10.3372/wi.36.36154

BioOne Complete (complete.BioOne.org) is a full-text database of 200 subscribed and open-access titles in the biological, ecological, and environmental sciences published by nonprofit societies, associations, museums, institutions, and presses.

Your use of this PDF, the BioOne Complete website, and all posted and associated content indicates your acceptance of BioOne's Terms of Use, available at <a href="https://www.bioone.org/terms-of-use">www.bioone.org/terms-of-use</a>.

Usage of BioOne Complete content is strictly limited to personal, educational, and non - commercial use. Commercial inquiries or rights and permissions requests should be directed to the individual publisher as copyright holder.

BioOne sees sustainable scholarly publishing as an inherently collaborative enterprise connecting authors, nonprofit publishers, academic institutions, research libraries, and research funders in the common goal of maximizing access to critical research.

JOHN R. EDMONDSON & H. WALTER LACK

### Karl Georg Theodor Kotschy's itinerary in southern Iran, 1841-42

#### Abstract

Edmondson, J. R. & Lack, H. W.: Karl Georg Theodor Kotschy's itinerary in southern Iran, 1841-42. — Willdenowia 36 (Special Issue): 579-588. — ISSN 0511-9618; © 2006 BGBM Berlin-Dahlem. doi:10.3372/wi.36.36154 (available via http://dx.doi.org/)

An itinerary is presented of the 1841-42 expedition to southern Iran by the Silesian botanist Theodor Kotschy (1813-66), together with a short biography, a discussion of specimen numbering and a gazetteer containing variant spellings of places visited, with their geographical coordinates.

Key words: biography, expedition itinerary, Zagros Mts, herbarium, history of botany.

#### Introduction

The plant collections of Theodor Kotschy (1813-66) from southern Iran laid the foundations of our knowledge of the flora of the Zagros Mts and their southern foothills, and of the Gulf islands of Khark and Khargu. At least 276 of the more than 800 gatherings subsequently became the types of new species, most being first described by Edmond Boissier (1810-85) in his series Diagnoses Plantarum Orientalium Novarum (Boissier 1843-59) and in Flora Orientalis (Boissier 1867-84).

#### **Biography**

Kotschy's brother Otto wrote the most complete biography, published in "Reliquiae Kotschyanae" (Kotschy p. vii-xl in Schweinfurth 1868). It is not necessary to reiterate here the whole life-story of this remarkable explorer, but in order to appreciate the productiveness of his visit to southern Iran we must make a brief reference to the experience gained on his earlier travels. His collections from Sudan, in particular, included many species new to science.

His first oriental journey took place from 1836 to 1838 in the company of Joseph Russegger in Turkish Cilicia, Syria, Egypt and Sudan (Kordofan). In 1839 he revisited Kordofan, in 1840 he went to Cyprus and in 1841 he returned to Asiatic Turkey before travelling south through Iraq to begin his explorations of the hitherto botanically unexplored Zagros Mts of southern Iran in the spring and summer of 1842. In 1843 he explored the area north of Tehran before returning to Europe.

At the age of 34, in 1847, he was finally granted a salary as assistant at the Imperial Cabinet of Curiosities in Vienna. The following year he made a visit to the Cilician Taurus in southern Turkey, his third visit to that country. In 1854 he visited the elderly Alexander von Humboldt and Karl H. E. Koch in Berlin.

His later travels included a trip to Egypt, Palestine and Lebanon in 1855, to Turkey, Cyprus and Kurdistan in 1859 and (with Unger) to Cyprus and northern Syria in 1862, narrowly avoiding capture by outlaws in the Amanus. Further biographical information is provided by Riedl-Dorn (2001).

#### Outline of the 1842 expedition

Kotschy arrived in Iran after travelling down the Euphrates from Mosul to Baghdad on a raft supported by animal skins, then went by ship to Basra. He set off for the is-



Fig. 1. Portrait of Kotschy [from Schweinfurth 1868].

land of Khark, located in the Gulf (Khalij-e Fars), on 12 December 1841, where he made his first collections on 30 December. The British garrison provided him with accommodation. He then visited the adjoining island of Kharku on 7 January 1842 before crossing to the mainland at Bushehr.

While in Khark he discovered the square or four-cornered crab, *Epixanthus kotschyi* and reportedly also collected marine algae from the waters of the Gulf, though these were not included with his 'Plantae Persiae australis' distribution.

After a lengthy stay in Bushehr, presumably spent gaining the necessary travel permits, he headed inland via Kazerun to the regional capital of Shiraz, arriving on 12 February 1842, before making a collection of around 80 gatherings around Jereh from 13-25 March and visiting the tar springs near Dalaki. The first two weeks of April were spent in Shiraz, and the next ten days involved a short trip north to the ruins of the ancient Iranian city Persepolis (Takht-e Jamshid) and the nearby Achaemenian tombs (Naqsh-e Rostam).

May was spent searching for plants in the mountains near Shiraz, where ascents of three quite lofty peaks (Barfi, Sabz Pushan and Ayob) gave Kotschy his first contacts with the rich, and previously unknown, alpine flora of the Zagros chain. At the beginning of June he made a short excursion to the Maharlu salt lake east of Shiraz and around the middle of the month he investigated Kuh-e Delu.

The last ten days of June were presumably spent in preparation for future fieldwork, as no collections were recorded; at that time he is known to have run short of money and the next phase of his journey was accomplished with the help of a loan from Prince Farhad Mirza. At the beginning of July he travelled northwest into the central Zagros, a loosely administered area mainly inhabited by nomadic tribespeople.

On 6 July he set out from the village of Dozdkurd at the foot of Kuh-e Dena to make his most extensive exploration of the High Zagros. For the rest of that month and on until early August he camped out on the upper slopes, sometimes on "alps where the nomads pitch their tents" and amassed numerous sets of more than 240 separate collections, many of which were of previously undescribed species. He finally reached the summit of Kuh-e Dena on 2 August.

Kotschy also made freshwater fish collections from around Shiraz, including the streams of the Maharlu basin in the Shiraz valley, the Kor River basin north of Shiraz, the Mond River (=



Fig. 2. Map of Iran by Dower (1836) showing area of study.



Fig. 3. Different styles of numbering on printed labels (taken from specimens at LIV).

Qarah Aqaj), which drains to the Persian Gulf and Lake Perishan (= Famur) near Kazerun. These were numbered independently of the plant specimen series, were subsequently named and published by Heckel (1846-49). Further details are provided by Coad (see References).

After concluding his explorations of the Zagros, Kotschy dispatched his collections, along with his Sudanese servant Ali (whose broken leg had prevented him from accompanying Kotschy on his recent explorations) to Basra on 13 October. He then travelled north, leaving Shiraz for Tehran on 15 November with an escorted convoy, and collected more plants in the mountains of Mazandaran province, north of Tehran, in 1843, during which he ascended Iran's highest mountain, Kuh-e Damavand, before returning to Vienna via Erzurum, Trabzon and Istanbul. His 1843 collections from Iran are numbered sequentially, paralleling those from southern Iran, and have sometimes therefore been cited in error from the province of Fars. Both series of exsiccatae are listed by Buser (1888).

#### Disposition of the collections

After being identified and named by Edmond Boissier, Kotschy's collections were arranged and distributed by the German missionary Rudolf F. Hohenacker (1798-1874), who at the time was based in Esslingen. Up to 1842 he was associated with the Esslinger Reiseverein, an association dedicated to promoting plant collecting expeditions; from 1843 onwards he operated independently. Kotschy's collections, which were divided into sets of very many duplicates, were dispersed to a large number of herbaria. The Index of Botanists (Harvard University Herbaria 2001-) merely states "widely distributed". Some are now accessible online, such as those at Göttingen (GOET) and Zürich (Z).

#### Characteristics of the labels

The printed labels issued by Hohenacker are numbered in several different ways (Fig. 3A-I). Numbers up to 793 follow (with a few exceptions) a chronological sequence, starting at Khark Island on 30 December 1841 and finishing at the foot of Kuh-e Dena on 6 August 1842. There is also a sequence of higher numbers "hors serie", which appear to have been generated at random. There is no obvious explanation for why such numbers were allocated, unless they were used to make up sets with a fixed number of specimens and there were too few duplicate specimens available to the distributor. The reason for the suffix letters is clearer: they usually occur where a mixed gathering was made by Kotschy and serve to differentiate the two named species.

In Flora Iranica (Rechinger 1963-), Kotschy gatherings are sometimes cited with two numbers separated by a decimal point. The reason for this is unclear, though the second number is usually higher than 800 and therefore belongs to the supplementary sequence. Occasionally the double numbering appears on the printed specimen label (Fig. 3B). Occasionally, a label may even bear three collection numbers (Fig. 3F).

#### Acknowledgements

We are most grateful to Mostafa Assadi for improvements to the gazetteer, to Brian Coad for information on fish localities and to David Winstanley for translating Kotschy's biography.

#### References

Boissier, E. 1842-59: Diagnoses plantarum orientalium novarum 1-3. – Geneva, etc.

— 1867-84: Flora orientalis **1-5.** – Geneva, etc.

Buser, R. 1888: Flora orientalis: Supplement. – Geneva, etc.

Coad, B.: Freshwater fishes of Iran. Introduction; history of research. – Published on the Internet http://www.briancoad.com/Introduction/history.htm [accessed June 2005].

Dower, J. 1836: Persia. – In: Tanner, H. S.: A new universal atlas containing maps of various empires, kingdoms, states and republics of the world. Comprehended in seventy sheets and forming a series of one hundred and seventeen maps, plans and sections. – Philadelphia.

Harvard University Herbaria 2001-: Index of botanists. – Published on the Internet http://brimsa.huh.harvard.edu/cms-wb/botanists.jsp?id=123439 [accessed June 2005].

Heckel, J. J. 1846-49: Die Fische Persiens gesammelt von Theodor Kotschy. – Pp. 257-272 in:
Russegger, J. (ed.), Reisen in Europa, Asien und Afrika, mit besonderer Rücksicht auf die naturwissenschaftlichen Verhältnisse der betreffenden Länder, unternommen in den Jahren 1835 bis 1841. 2(3). – Stuttgart.

Rechinger, K. H. 1963-: Flora iranica. Flora des iranischen Hochlandes und der umrahmenden Gebirge 1-. – Graz.

Riedl-Dorn, C. 2001: Theodor Kotschy. – Pp. 257-260 in: Seipel, W. (ed.), Die Entdeckung der Welt – die Welt der Entdeckungen. Österreichische Forscher, Sammler, Abenteurer. – Wien.

Schweinfurth, G. 1868: Reliquiae Kotschyanae. Beschreibung und Abbildung einer Anzahl unbeschriebener oder wenig gekannter Pflanzenarten, welche Theodor Kotschy auf seinen Reisen

- in den Jahren 1837 bis 1839 als Begleiter Joseph's von Russegger in den südlich von Kordofan und oberhalb Fesoglu gelegenen Bergen der freien Neger gesammelt hat ... Nebst einer biographischen Skizze Theodor Kotschy's. Berlin.
- TGN 2000-: Ghetty Thesaurus of Geographic Names (TGN) online. Published on the Internet http://www.getty.edu/research/conducting\_research/vocabularies/tgn/ [accessed June 2005]
- USBGN 1956: United States Board on Geographic Names, Gazetteer no. 19: Iran. Washington, DC.

#### Addresses of the authors:

- J. R. Edmondson, World Museum Liverpool, William Brown Street, Liverpool L3 8EN, UK; John.Edmondson@liverpoolmuseums.org.uk
- H. W. Lack, Botanischer Garten und Botanisches Museum Berlin-Dahlem, Freie Universität Berlin, Königin-Luise-Str. 6-9, D-14195 Berlin; e-mail: h.w.lack@bgbm.org

#### Appendix 1. Theodor Kotschy's itinerary in southern Iran, 1841-42

Place names in square brackets and double quotes are as spelled by Kotschy & Hohenacker, the collection numbers are in italics.

```
December 1841
30: Jezireh-ye Khark ["insula Karek"], no. 7-9.
January 1842
4: Khark, no. 14
7: Khark, no. 15-22
7-13: Kharku ["insula Korgo"], no. 15a-26
February
no collections
March
13-25: near Jereh ["Gere"], between Bushehr and Shiraz, no. 13, 28-115
           Dalaki ["Dalechi"], no. 108-211
       Rahdar ["Radar"], no. 127-131
At petroleum springs near Dalaki, no. 142, 158, 193
Kazerun ["Kaserun"], no. 144-146
Kotal-e Malu ["Kuh Malo"] near Dalaki, no. 138, 153, 163-164
April
12-23: in and near the ruins of Persepolis, no. 216-290
29: near Shiraz ["Schiras"], no. 291-302
30: at the monument of Nagsh-e Rostam ["Nakschi Rustam"], 13 km NW of Persepolis, no.
       303-305
30 (-3 May): near Shiraz ["Schiras"], no. 306-323
3-4: Kuh-e Barfi ["Kuh-Barfi"] near Shiraz, no. 324-346
[5-9: no collections]
10-11: near Shiraz, no. 347-363
13-14: Kuh-e Sabz Pushan ["Sabst-Buschom"] near Shiraz, no. 364-380
[15-17: no collections]
18: near Zargan ["Zergun"] near ruins of Persepolis, no. 381-387
19-20: Kuh-e Ayub ["Kuh-Ajub"] near Persepolis, no. 390-409
24-31: Kuh-e Sabz Pushan ["Sabst-Buschom"] near Shiraz, no. 411-451
30: near Shiraz, no. 437-442
1: near Kurbal ["Korwar"] village, no. 453
1: Namak Darya ["Nemek-Derja"] near Shiraz, no. 454-464
[2-9: no collections]
10-21: Kuh-e Delu ["Kuh-Delu"], no. 465-563
17, 20: Darengun ["Deremgun"] at foot of Kuh-e Delu, no. 538-548, 554-557
22: "Kuh-Barchdschi" near Kuh-e Delu, no. 560-561
[23 June - 6 July: no collections]
July
6-31: (& August 1-10): Kuh-e Dena ["Kuh-Daëna"], no. 564-795
6: at Dozdkurd ["Dusekurd"] village at foot of Kuh-e Dena, no. 566-568
10: Cheshmeh Piaz ["Dscheschme-Pias"], no. 612
10, 13: "jugo Kosche Sirch" [or "Zirch"], no. 614-617a
```

15: "Posan-Pir" ridge, no. 657

16: Kuh-e Dow Shakh ["Kuh-Doschek"], one of the peaks of Kuh-e Dena, no. 663-665

17-19: Kakan plateau on Kuh-e Dena, no. 671-689

20: Kuh-e Dena, "Posan Pir" and S side, no. 693-710

21: Kuh-e Dena, W-side, no. 712-721

21: "Kosche Sirch" [or "Zirch"], no. 716, 721

22: Kuh-e Dena, S side, no. 724 foot of Kuh-e Dena, no. 725-729

23: Kuh-e Dena, W side, no. 732

23-29: Cheshmeh Piaz on Kuh-e Dena, no. 732-759

27: Dozdkurd ["Dusekurd"] village at foot of Kuh-e Dena, no. 735

29: summit of Kuh-e Dena, no. 758, 765-770

31: Cheshmeh-Piaz, no. 771-772 Kuh-e Dena, no. 773-774.

#### August

1: Kuh-e Dena, no. 778-781 Cheshmeh-Piaz, no. 782-786

6: Foot of Kuh-e Dena, no. 788-793

## Appendix 2. Alphabetical gazetteer of place-names, with modern spellings, geographical coordinates and sub-sites

Spellings in bold have been standardised by reference to the US Board of Geographic Names (USBGN 1956) or the Getty Thesaurus of Geographical Names (TGN 2000-). Additional sites on Kuh-e Dena were checked on Tal-i Khusrovi sheet H-39J, 1:253,440, 4th edition, GSGS.

Abuschir see Bushehr
Ajub, Kuh see Kuh-e Ayyub
Barchdschi, Kuh see Kuh Barchdschi
Barfi, Kuh see Kuh-e Barfi

Bererus unlocalised; near Kuh-e Sabz Pushan

Bonaser, Berg Gasser Bonasir unlocalised; near Shiraz

Borj-e Yakki Sangar 30°18'N, 51°26'E (near Kuh-e Delu) (Borj = tower, san-

gar = fort)

Buschom, Kuh

Bushehr (Abuschir, Buschier)

Daëna, Kuh

See Kuh-e Sabz Pushan

28°59'N, 50°50'E

see Kuh-e Dena

Cheshme-Piaz see Kuh-e Dena, Cheshmeh-ye Piaz

Dalaki (Daleki or Dalechi) 29°26'N, 51°17'E

Dalaki Rud (Dalechi / Daleki Fluss) tributary of Hilleh Rud; fed by Shirin Rud

Dalaki naphtha springs 29°24′N, 51°17′E

Delu, Kuh-e see Kuh-e Delu
Darengun (Deremgun) 29°24'N, 52°21'E (NE of Kuh-e Delu)

Darreh (Dare) Kele
Diz-e Kurd
see Kuh-e Dena, Darreh Kele
see Kuh-e Dena, Dozdkurd

Dscheschme-Pias, Dschischm Pias see Kuh-e Dena, Cheshmeh-ye Piaz

(Zwiebelquelle)

Dusekurd see Kuh-e Dena, Dozdkurd

Gere see Jereh

Gere, Kaffar Ali near **Jereh**; not precisely localised

Gulfin, Kuh

Jereh (Gere, Jireh)

Jereh, Konar Paria

unlocalised

29°15'N, 51°58'E

see Konar Takhteh

Kara Agatsch Fluß (near **Jereh**)
Karak, Karrak, Karek, insula
Kakan, Kakun
Kargu, insula

Qara Aqaj, tributary of Shirin Rud, runs NE to Dalaki Rud
see Khark, Jazireh-ye
see Kuh-e Dena, Kakun
see Khargu

Kaseroum, Kaseroun, Kaserum
Katyr Sattee des Posan Pir

Kazerun (Kaserum, Kaseroum, Ka29°37'N, 51°38'E

seroun)

Kharku, Jazireh-ye
Khark, Jazireh-ye
Konar Paria

See Konar Takhteh

Seroun)

29°19'N, 50°21'E (island)

29°15'N, 50°20'E (island)

Konar Takhteh 29°32'N, 51°24'E between Dalaki and Jereh (Takhteh =

Korgo see Kharku, Jazireh-ye

Korwar see Kurbal Kosche Syrch (Kosche Zyrch) see Kuh-e Dena

**Kotal-e Malu** (Kotele Malo, 29°29'N, 51°23'E (Kotal = pass), NE of **Dalaki** Kuh Malo)

Kotal-e Pire Zan (Pire-zen) unlocalised; near **Shiraz** (Pire zan = old lady)

Kuh-Ajub see **Kuh-e Ayyub** (Kuh = mountain)
Kuh Barfi see **Kuh-e Barfi** 

Kuh Barchdschi near Kuh-e Delu, 29°22'N, 5°19'E

Kuh Buschom see **Kuh-e Sabz Pushan** 

Kuh-Daëna see **Kuh-e Dena** Kuh Delu, Ave sende unlocalised; near **Kuh-e Delu, 29°22'N, 5°19'E** 

Kuh Delu, Deremgun see **Darengun** Kuh Delu see **Kuh-e Delu** 

Kuh Delu, Berg Borchudschi see **Borj-e Yakki Sangar** Kuh-Doschek see **Kuh-e Dow Shakh** 

Kuh-e Ayyub (Ajub) 30°00'N, 52°40'E, near Persepolis Kuh-e Barfi 29°42'N, 52°46'E (Barfi = snowy), between Shiraz and

Zarqan Kuh-e Delu 29°22'N, 5°19'E

Kuh-e Dena [in Ostan-e Kohgilu- 30°57'N, 51°27'E (approx.), altitude of summit 4409 m. yeh va Buyer Ahmad]

**Kuh-e Dena, Cheshmeh-ye Piaz** on **Kuh-e Dena, 30°55'N, 51°30'E** (Cheshmeh = spring, (Dscheschme Pias) Piaz = *Allium*)

**Kuh-e Dena, Darreh Kele** (Dere by **Kuh-e Dena** (Darreh = stream, valley, gorge)

Kuh-e Dena, Dozdkurd (Dez Gerd) 30°45'N, 5°56'E: village E. of Kuh-e Dena Kuh-e Dena, Kakun 30°39'N, 51°48'E: plateau on Kuh-e Dena

Kuh-e Dena, Kosche Syrch (Zyrch) one of the peaks of **Kuh-e Dena** 

Kuh-e Dena, Posan Pir (Posem Pir) ridge on Kuh-e Dena Kuh-e Dow Shakh ridge on Kuh-e Dena (Dow = two, Shakh = l

**Kuh-e Dow Shakh** peak on **Kuh-e Dena** (Dow = two, Shakh = horn) Kuh Malo see **Kotal-e Malu** 

Kuh Mortas Ali gegen Baba Koi bei grave of Baba Kuhi on Kuh-e Mortaza Ali, a small moun-Schiras tain at entrance to Shiraz from Isfahan road (Baba = father), 29°23'N, 52°40'E

Kuh-e Qasr 'Ali near Dalaki, 29°26'N, 51°17'E

**Kuh-e Sabz Pushan** (Sabst Buschom) **29°28'N, 52°27'E** (Sabz = green, Pushan = covered)

**Kurbal** (Korwar) Lora, Tengi

Maharlu, Daryacheh-ye

Malo, Kuh Menuki Daria

Nagschi Taimur

Nakschi Rustam

Nemek Darja pr[ope] Korwar Nemek-Derja, Nemeki Daria

Nemoki Deria **Persepolis** 

Persepolis, Nakhsh-e Rostam

(Nagschi Rustam) Persepolis, "Tscha Mana"

Persepolis, Zergun

Persepons, Zergun

Posan Pir, Katyr Sattee

Qasr 'Ali, Kuh Radar

Rahdar (Radar)

Sabst Buschom, Kuh (Buschon,

Buschoon)

Sadye

Shiraz (Schiras)

Shiraz, Bonaser; Berg Gasser

Bonaser

Shiraz, Deremgun Shiraz, Pire Zan Shiraz, Sadye

Shirin Rud (Fluss Kara-Agatsch)

Takht-e Jamshid

Tang-e Lirab (Tengi Lora)

Tscheschme-Piaz **Zarqan,** Gardaneh-ye

Zergun

29°11'N, 52°44'E (SE of Kuh-e Sabz Pushan)

see Tang-e Lirab

 $29^{\circ}25'N$ ,  $52^{\circ}50'E$  (Daryacheh = small sea, i.e. lake)

see Kotal-e Malu

unlocalised (Darya = lake) – possibly an error for Nemoki

(Namak), i.e. salt

Naqsh-e Taimur (tomb of Taimur); unlocalised, near Ka-

zerun

see Persepolis, Naqsh-e Rostam

see Kurbal see Maharlu see Maharlu

29°57'N, 52°54'E; in Persian, Takht-e Jamshid (throne

of Jamshid)

Achaemenid tombs and monuments NW of Persepolis,

29°59'N, 52°51'E

Persepolis, 29°57'N, 52°54'E

see Zarqan

ridge on Kuh-e Dena, q.v.; not precisely localised

see Kuh-e Qasr 'Ali see Rahdar 29°20 N. 51°16'E

see **Shiraz**, Saadi (tomb of)

see Kuh-e Sabz Pushan

29°36'N, 52°32'E

see Bonaser

see Darinjan

unlocalised, near **Shiraz** (Pir = old, Zan = woman)

Tomb of Saadi, Shiraz (famous Iranian poet)

approx. 52°05'E, 55°12'E

see Persepolis

unlocalised (Tang = gorge)

see Kuh-e Dena, Cheshmeh-ye Piaz 29°46'N, 52°45'E (Gardaneh = pass)

see Zarqan