

# Additions to the Lichen Flora of Jordan

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# Additions to the Lichen Flora of Jordan

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## RÉSUMÉ

EL-OQLAH, A. A., D. L. HAWKSWORTH & J. N. LAHHAM (1986). Additions à la flore lichénique de Jordanie. *Candollea* 41: 69-73. En anglais, résumé français.

Trente neuf espèces de lichens, principalement des espèces croûteuses saxicoles, sont signalées de Jordanie pour la première fois. Les récoltes ont été faites dans les provinces du Nord, de l'Est et du Sud dans les années 1981-1985.

## ABSTRACT

EL-OQLAH, A. A., D. L. HAWKSWORTH & J. N. LAHHAM (1986). Additions to the Lichen Flora of Jordan. *Candollea* 41: 69-73. In English, French abstract.

Thirty-nine species of lichens, mainly crustose saxicolous species, are reported from Jordan for the first time. The collections were made in the northern, eastern and southern provinces in the years 1981-1985.

## Introduction

The lichens present in Arabian countries have scarcely been investigated and no comprehensive survey of the species occurring in Jordan has been published. EL-OQLAH & LAHHAM (1985) reported on 38 species collected in the northern part of the country, but subsequent collections we have made led to the discovery of additional species present in the country which are reported on here.

The species reported on here come from three main regions; Ajloun Mountains, Azraq Oasis and the southern hilly area. Ajloun Mountains is in the northern most part of Jordan which has a mediterranean climate with 350-500 mm rain p.a. and a mean annual temperature in the range 15-20°C (ABU-KHADER & al., 1968). In contrast the Azraq Oasis is in an area with a hot desert climate, where the precipitation does not exceed 150 mm p.a. and the maximum temperatures reach 35°C; this Oasis is frequented by large numbers of birds migrating between Africa and Europe, a factor which may be important in understanding the reasons for the occurrence of some species in that locality. In the southern hilly area, the climate is again mediterranean with the mean rainfall in the range 250-450 mm p.a. while the temperature can exceed 35°C (ZOHARY, 1973).

The specimens were identified during a visit to the UK in August 1985 using the literature and reference collections available at the Commonwealth Mycological Institute (Kew) and the British Museum (Natural History), (London). However, it must be remembered that species in some of the groups reported on are in need of critical taxonomic work and that in some cases authentic material for comparison was unavailable. While it is therefore inevitable that some of the determinations given here will require re-consideration in the light of future work, the names employed here will provide a much sounder basis for future studies in Jordan than any currently available.

The specimens on which this contribution is based are preserved in the herbarium of the Department of Biological Sciences, Yarmouk University, Irbid, Jordan.

### Collecting localities

#### (A) Northern Province

1. Irbid, including Ajloun, Jarashad Mafraq. Alt. 600-1200 m. 32°50-80'N, 35°18'-36°-15'E. Many collections 1981-1985.

#### (B) Eastern Province

2. Azraq Oasis. Alt. 600 m. 31°8'N, 36°85'E. 6 March 1984.

#### (C) Southern Province

3. Karak. Alt. 850 m. 31°03'N, 35°8'E. 1 April 1984.
4. Tafila. Alt. 1300 m. 30°08'N, 35°7'E. 3 April 1984.
5. Shaubak. Alt. 1200 m. 30°06'N, 35°5'E. 4 April 1984.

Specimens were collected by Drs. A. A. El-Oqlah, J. N. Lahham & Mr. M. Khudair.

### New records

The species are arranged alphabetically for ease of reference. Nomenclature follows CANON & al. (1985) where appropriate.

#### **Acarospora cervina** (Pers.) Massal.

On calcareous rocks: Jarash, Kufarkhal.

#### **Acarospora bornmuelleri** B. Stein

On basalt: Irbid, Al Mansourah.

#### **Acarospora laqueala** Stizenb.

On calcareous rocks: Almafraqa Umjema; Azraq Qasir Amrah, Jarash. Qafgafa and, Alsalt Wadi Shuaib.

#### **Acarospora strigata** (Nyl.) Jatta

On calcareous rocks: Alsalt, Wadi Shuaib.

#### **Anaptychia ulotrichoides** (Vainio) Vainio

On calcareous rocks: Irbid, Alshoubak and Tafila. Det.: R. Moberg.

#### **Aspicilia malmeana** (Magnusson) Ozenda & Clauzade

On calcareous rocks: Irbid, Zobyia.

#### **Aspicilia subcircinata** (Nyl.) Coppins

On calcareous rocks: Irbid, Zobyia.

#### **Caloplaca bilewskii** B. de Lesd.

On calcareous rocks: Irbid, Kufarjaiez.

**Caloplaca chalybaea** (Fr.) Müll. Arg.

On basalt rocks: Almafraaq Umjemal.

**Caloplaca citrina** (Hoffm.) Th. Fr.

On calcareous rocks: Jarash, Debeen; basalt rocks: Alazraq, Azraq oasis, pools area.

**Caloplaca erythrocarpa** (Pers.) Zwackh

On calcareous rocks: Tafilah, 15 km south of the town, Alazraq, Gasir Amrah.

**Caloplaca lactea** (Massal.) Zahlbr.

On calcareous rocks: Irbid, Zobyia.

**Caloplaca obliterans** (Nyl.) Blomb. & Forsskål

On flint rocks: Irbid, Zobyia.

**Candelariella aurella** (Hoffm.) Zahlbr.

On calcareous rocks: Irbid, Zobyia.

**Candelariella vitellina** (Hoffm.) Müll. Arg.

On basalt rocks: Almafraaq Umjemal.

**Collema tenax** (Swartz) Ach. var. **ceranoides** (Borrer) Degel.

On ground: Al Azraq, Qasir Amrah.

**Dermatocarpon subcrustosum** (Nyl.) Zahlbr.

On calcareous rocks: Al Azraq, Qasir Amrah.

**Diploschistes albescens** Lettau

On sandstone: Jarash Sedelmalik Talal; on soil: Almafraaq Umjemal.

**Lecanora albescens** (Hoffm.) Branth & Rostrup

On calcareous rocks: Irbid, Zobyia.

**Lecanora crenulata** (Dickson) Hook.

On calcareous rocks: Irbid, Zobyia.

**Lecanora dispersa** (Pers.) Sommerf.

On flint rocks: Irbid, Zobyia; on basalt rocks: Almafraaq Umjemal.

**Lecanora radiosa** (Hoffm.) Schaerer

On calcareous rocks: Irbid, Zobyia.

**Lecidea monticola** (Ach.) Schaerer

On calcareous rocks: Tafila, Lahdhah.

**Lecidea sulphurea** (Hoffm.) Wahlenb.

On calcareous rocks: Karak, 15 km south of the town.

**Leproplaca chrysodeta** (Vainio ex Räsänen) Laundon

On calcareous rocks: Irbid, Zobyia.

**Parmelia acetabulum** (Necker) Duby

On *Quercus calliprinos* bark: Jarash, Kufurkhal.

**Parmelia verruculifera** Nyl.

On flint rocks: Irbid, Zobyia.

**Peltula euploca** (Ach.) Poelt ex Ozenda & Clauzade

On basalt rocks: Alazraq, Azraq oasis, pools area.

**Rinodina calcarea** (Arnold) Arnold

On calcareous rock: Irbid. Det.: H. Mayerhofer.

**Rinodina mediterranea** Flagey

On calcareous rocks: Al Azraq, Qasir Amrah.

**Solenopsora cesatii** (Massal.) Zahlbr.

On calcareous rocks: Almafraaq, Umjema.

**Squamarina conrescens** (Müll. Arg.) Poelt

On calcareous rocks: Irbid, Torrah.

**Verrucaria baldensis** Massal.

On calcareous rocks: Alsalt, Wadi Shuaib.

**Verrucaria glaucina** Ach.

On calcareous rocks: Alazraq, Qasir Amrah.

**Verrucaria muralis** Ach.

On calcareous rocks: Ajloun, Rasoun, Sous Rasoun, Alsalt, Wadi Shuaib.

**Verrucaria viridula** (Schrader) Ach.

On calcareous rocks: Irbid, Zobyia.

**Xanthoria elegans** (Link) Th. Fr.

On flint rocks: Karak, 15 km south of the town.

**Xanthoria fallax** (Hepp) Arnold

On calcareous rocks: Irbid, Almansourah.

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