



A photograph of several yellow flowers, possibly from a legume family, against a clear blue sky. The flowers are in various stages of bloom, with some fully open and others as buds. The background is a soft, out-of-focus blue sky.

## **Biodiversity assessment of Jabal Moussa**

**Michael Wink**

*Professor*

Institut für Pharmazie und Molekulare Biotechnologie

Ruprecht-Karls-Universität Heidelberg



Anemone coronaria anunculaceae (© M.Wink)



Lantana camara (© M.Wink)



Nerium oleander apocynaceae (© M.Wink)



Anthemis tinctoria asteraceae (© M.Wink)

## An impressive biodiversity

I have visited the Jabal Moussa area on May 19<sup>th</sup> 2007 and could explore a substantial part of the region. In summary although I have only seen the area in a certain season, the impressive high biodiversity and unspoiled nature was clearly apparent. In addition to interesting larger bird species, such as Snake eagles, Little eagles and Kestrels, I observed a high diversity of passerine birds, especially warblers (genera *Sylvia*, *Hippolais*, *Locustella*) and tits, but also Blue rock thrush and finches. Especially exciting is the vegetation, which is highly influenced and promoted by the alkaline soil (caused by the dominant dolomite rock formation). Therefore, a number of chalk loving plant species are abundant, such as several species of orchids (such as *Ophrys attica*, *Anacamptis pyramidalis*), *Aristolochia altissima* and lilies (*Ornithogalum libanoticum*). The area holds a good population of otherwise rare plants such as *Paeonia mascula*, *Daphneoleoides*, *Styrax officinalis*. Even the endemic *Origanum libanoticum* is abundant in the area. The woodland is in good shape with almost unspoiled oak forests with *Quercus calliprinos* and *Quercus cerris*; such woodlands are rare in Lebanon. In the undercover of the forests, several species of lilies (*Asphodelus microcarpus*), *Hypericum thymifolium*, *Michauxia campanuloides*. *Linum bienne*, *Pentapera sicula*, *Anemone coronaria*, and *Cyclamen persicum* could be seen. The non-oak woodland is also diverse, with *Styrax officinalis*, *Pistacia palaestina*, *Juniperus drupacea*, *J. oxycedrus*, *Cercis siliquastrum*, and *Ostrya carpinifolia* as dominant species and *Coronilla*, *Daphne*, *Aristolochia scabridula*, *Valeriana dioscorides*, *Prangos asperula* as smaller shrubs or herbs.

Abundant in the more open Garrigue-type vegetation are shrubs, such as *Spartium junceum*, *Calicotome spinosa*, *Salvia triloba*, *Cistus creticus*, *Phlomis longifolia*, *Verbascum libanoticum*, *V. berytheum*, *Campanula rapunculoides*, *Orobanche spec.*, *Hypericum libanoticum*, *Helichrysum sanguineum*, *Centaurea eryngioides*, *Phlomis brachyodon*, and most impressively *Rhododendron ponticum*.

In conclusion, the Jabal Moussa is an outstanding area in Lebanon with a unique almost unspoiled vegetation and fauna.

## A site to protect

Threats are: housing and tourism (construction of hotels or restaurants in the conservation area), road building, general pollution, deforestation, wood collection for charcoal production.

Special care should be drawn to grazing by sheep and goats; overgrazing will destroy the unique biodiversity of plants, as these animals will graze upon the delicious herbs. Therefore, grazing should be reduced as much as possible or completely banned from the protection area. Another issue is the hunting of rare bird species, especially on migration. Lebanon is a gateway for many migrating birds, such as eagles, storks, herons and pelicans. All these birds are rare and highly protected all over the world. Unfortunately, Lebanon is still a place where illegal hunting of migrants occurs. This threat also exists in the Jabal Moussa area; while I was there, I saw a number of migrating raptors and storks (even though my visit was at a late time of year when migration is almost finished).

In summary I strongly recommend, that every effort should be made to protect the area. This measure is not only important for Lebanon but for a wider area of the Near East.

Heidelberg, 05.01.2008



Juniperus oxycedrus (© APJM)