

ARABIAN PLANTS SPECIALIST GROUP

Triennium report – 2001 – 2004

1. Introduction

- The APSG identified three objectives for completion during the previous triennium, but because only limited progress was achieved it was decided to maintain the same objectives for the triennium 2000 – 2004. The objectives are listed below:
 - Preparing and publishing the Red Data List for the endangered and threatened plants in the region;
 - Developing an Arabian Plants Database (APDB);
 - Compiling and publishing the 'Flora of the Arabian Peninsula and Socotra'
- Even though the general shortage of funds remains a serious restriction, the APSG did manage to move towards achieving some of its objectives details of which will be discussed below. The two most significant achievements are the publication of the Arabian Flora and secondly the approval of the conservation status of the plant species found on Socotra (Yemen) by the regional Red List Authority on behalf of the APSG based on a report submitted by APSG Steering Committee member Dr Tony Miller. More information is provided below.
- Credit must be given to the number of volunteers who, who during the triennium supported the activities of the APSG and submitted requested information.

2. Progress

2.1. Red Data List for the region

- A workshop was held on **** to **** on applying the new criteria for red data listing, run by Dr Craig Hylton-Taylor in Riyadh. A number of local botanists took advantage of the advantage presented to learn more about red data listing in general and the application of the new criteria in particular
- Most of the countries in the region have prepared Red Data Lists individually, some of which have already been published in the IUCN Red Data Books.
- A Regional Committee has been appointed to combine these lists and prepare an amalgamated list for the region.
- A list of endangered and threatened plants for the Kingdom of Saudi Arabia has also been compiled, based on application of the new IUCN threatened list categories. This list has been approved by the Arabian Plants Authority and has been submitted to the IUCN Red Data Book for publication.
- The APSG Fundraising Committee was not able to find a sponsor to finance the finalisation of the list and its preparation for publication. Completion of this task and the publication of this list remains a priority and the search for a sponsor will continue.

2.2. Notes on the status of plants on Socotra archipelago (Yemen)

The most important development in this regard during the present triennium has been the submission and approval of the status of the plants from Socotra by the Red List Authority on behalf of the APSG. Most of this work was done by Dr Tony Miller, Royal Botanic Garden, Edinburgh.

2.2.1. Background

The conservation status of the 305 endemic species and 7 endemic infra-specific taxa (varieties and subspecies) was assessed based on the IUCN red list categories and criteria (Version 3.1, IUCN, 2001). The 'Threatened' Categories are Critically Endangered, Endangered and Vulnerable and within each of these categories are a series of quantitative criteria and sub-criteria against which all species were evaluated. The results are summarised in the table below.

IUCN Categories for Socotran Endemic Plants	
Extinct	4
Critically endangered	3
Endangered	27
Vulnerable	118
Near threatened	14
Least concern	118
Data deficient	29
Total	313

Table 1: The conservation status of the Socotran endemic plants species

2.2.2. Plants were placed in seven categories

- I. **Extinct (EX).** Four plants (*Barleria argentea* Balf.f., *Pluchea glutinosa* Balf.f., *Psiadia schweinfurthii* Balf.f. and *Valerianella affinis* Balf.f.) are considered to be extinct. These species have not been seen for one hundred years or more after repeated searches.
 - II. **Critically Endangered (CR).** Three taxa (*Cadaba sp. nov.*, *Pelargonium sp. nov.* and *Duvaliandra dioscoridis* (Lavranos) M. G. Gilbert) were placed in this category. These are the plants under the most serious threat of extinction on the islands.
 - III. **Endangered (EN).** 27 taxa were placed in this category. These are plants with a very restricted distribution and also under a threat, most commonly by a decline in the quality of habitat due to over-grazing (*Neuracanthus aculeatus*) or by the trend of lower rainfall in the region and would be particularly vulnerable to the effects global warming (*Begonia samhaensis*, *Ledebouria sp. nov.* and *Pelargonium sp. nov.*).
 - IV. **Vulnerable (VU).** 119 taxa have been placed in this category. A number of different criteria have been applied. The commonest category of threatened status is VUD2 with 109 taxa. This is rather a "catch-all" category, which includes those narrowly distributed endemics which have "populations with a very restricted area of occupancy such that they are prone to the effects of human activities or stochastic events within a very short period in an uncertain future".
- Near Threatened (nt).** 14 taxa were placed in this category. It includes several trees (e.g. *Maerua angolensis* var. *socotrana*) which are abundant at present but which are likely to suffer as a consequence of the development of the island and the almost inevitable breakdown of the traditional practices which at present protect them. For instance there is minimal regeneration of *Maerua angolensis* var. *socotrana* in the more

- V. inaccessible areas of the island, but, in the absence of alternative building woods, this straight-trunked and hardwood species continues to be under threat for building purposes. Likewise *Acacia pennivenia* and *Commiphora ornifolia*, whilst abundant at present, are both lopped as livestock fodder in dry periods (as is the evergreen *Maerua angolensis*); *Commiphora ornifolia* also suffers from lack of regeneration for reasons perhaps connected with the progressive dessication of the islands. If livestock numbers increase greatly, or a succession of drought years should occur, all three of these species would be greatly threatened.
- VI. **Least Concern (lc)**. This category includes a number of common, widely distributed endemic species, such as *Croton socotranus* and *Jatropha unicostata*, which are under no immediate or perceived threat. It also includes 66 taxa, which were, using the 1994 version, considered Vulnerable, because of their restricted range.
- VII. **Data Deficient (DD)**. This category was used when data was uncertain and its use was restricted to two main categories of plants: where their taxonomy is unclear (e.g. *Ballochia*, *Trichocalyx*) or where they have not been recognised in the field (e.g. grass species). It was tried to keep taxa in this category to a minimum (28 taxa) following the instruction that “the absence of high quality data should not *deter attempts at applying the criteria*”. *The bulk of taxa placed here are taxonomically poorly defined species (such as Ballochia spp., Trichocalyx spp. and certain Heliotropium spp.) where no reliance could be placed on field records. A smaller number of species were included when they could not be identified with certainty because they are only rarely seen in flower and are similar in the vegetative state to other species (for instance Crinum balfourii).*

2.2.3. Conservation and Threats

The isolation of the islands and the strong traditional land-use management practices employed by the indigenous population have both served to protect the vegetation and biodiversity of the Socotra Archipelago. However, with the building of the seaport, the development of the airport and building of roads on the island, Socotra is fast losing its isolation. An inevitable consequence of this is that traditional land-use management practices will be modified to adapt to these developments, with the risk that they may break down altogether.

Five types of threat were identified. The first four categories can be considered human in origin, the fifth is climatic:

- Development of infrastructure
- Breakdown of traditional land management practices governing grazing, timber and fuel extraction, plant products and livestock management
- Introduction of exotic plants
- Plant collecting
- Climate change

2.3. Arabian Plant Database (APDB)

No progress has been made regarding the development of the APDB. It has now also been decided that the programme that was developed by the SSC would be used as soon as the software became available.

2.4. Flora of the Arabian Peninsula and Socotra

On finding a donor willing to fund the finalisation and publication of the ‘Flora of the Arabian Peninsula and Socotra’ the Executive Committee of the APSG entered an agreement with the Royal Botanic Garden Edinburgh (RBGE) to write and edit five volumes that would represent the flora of the of the Arabian Peninsula and Socotra. The first volume was released during 2003, with the remaining volumes

to be out of press on a predetermined publication scheduled with the last volume scheduled to be ready by 2008. Further details are available from the Chair of the APSG at the following address: Dr A. Abuzinada, Secretary General, NCWCD, P. O. Box 61681, Riyadh, Tel.; + 661 441 8700 Fax: + 661 441 0797 or at e-mail: ncwcd@zajil.net

3. Other activities and achievements

3.1 Meetings

Due to financial restrictions and some extent the security situation in the region it was difficult to organise meetings of the APSG during the triennium. However, the Executive Committee, based in Saudi Arabia met several times and other regional meetings were used to convene Steering Committee meetings with those APSG Steering Committee members present. Enough APSG members attended a meeting organised by the Gulf Countries Conference (GCC) that convened in Bahrain on the 22 March 2004, for the APSG to have a general meeting.

3.2 Regional Plant Conservation Strategy

Following the adoption of the Global Plant Conservation Strategy by the 6th Meeting of the Parties to the Convention on Biological Diversity the APSG decided to prepare a similar strategy for the APSG region, based on the Global Plant Strategy. The IUCN WESCANA Regional Conservation Forum in Kuwait, held from 12 – 18 September 2003 presented an opportunity to APSG also convene a workshop on the development of the proposed strategy. Dr. Peter Wyse Jackson, Secretary General Botanical Gardens International; Dr Jane Smart, Executive Director, Planta Europa and Mr. Chris Willis, South African Botanical Gardens and several local botanists gave presentations. At the close of the workshop a small team of botanists from the APSG was appointed as an Action Committee to prepare the first draft of a Regional Plant Conservation Strategy. This Action Group, under the Chair of Dr. Davud Eisawi submitted a report on their progress at the APSG General Meeting, convened as a side meeting during the GCC meeting in Bahrain.

3.3 Important Plant Areas in the Peninsula

In keeping with activities to identify important plant areas (IPAs) in other parts of the world, members of the Arabian Plants Specialist Group have started working on identifying IPAs in the Region. At this stage the work is just starting, but considerable progress is anticipated in the coming quadrennial period.

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