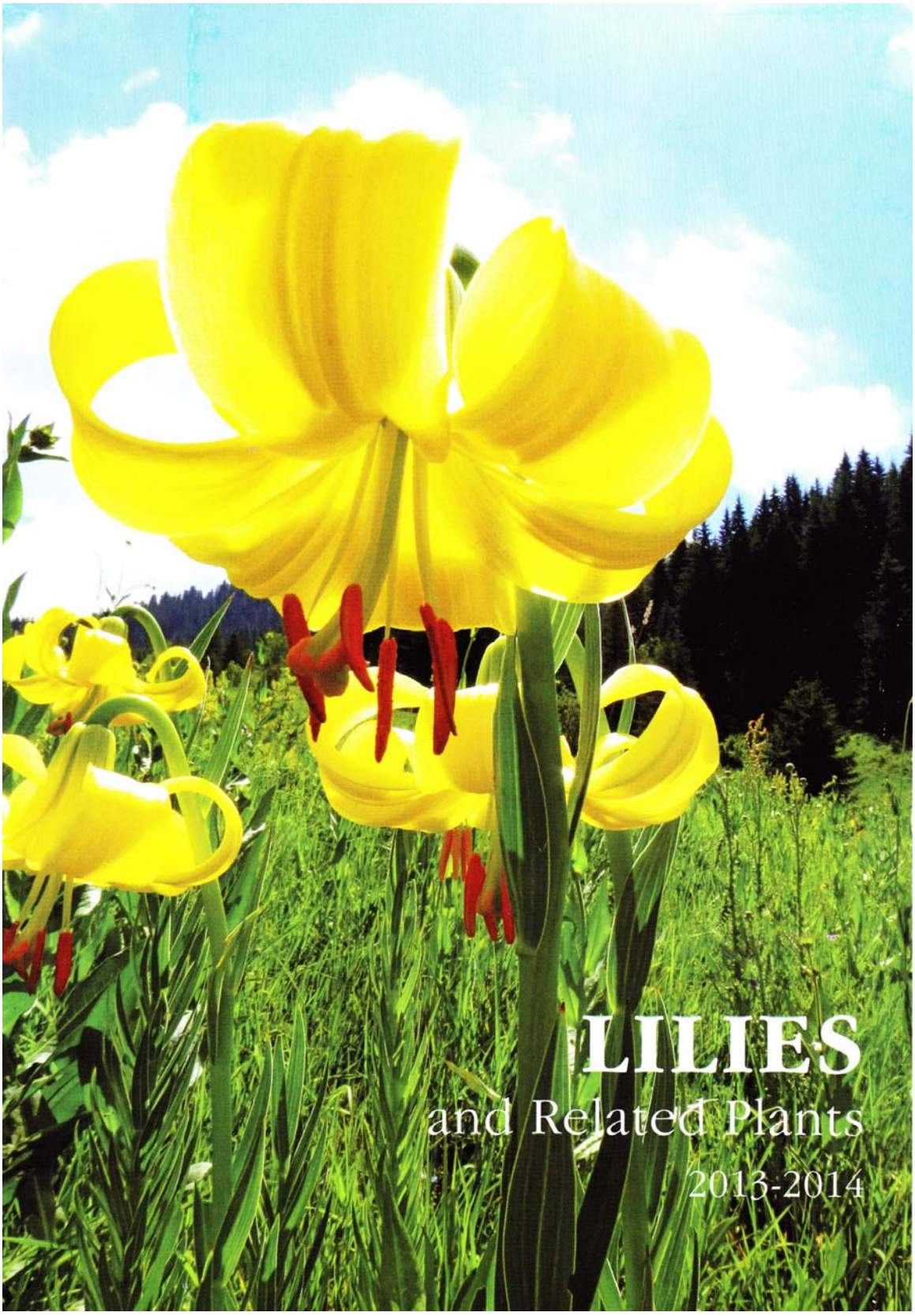

This article on *Lilium rhodopeaum* by Alan Mitchell, Chris Durdin and Vladimir Trifonov is from Lilies and Related Plants 2013-14, published in December 2013. Photos are by Chris Gibson. This scanned extract – the cover and pages 44-47 – is shown on www.honeyguide.co.uk courtesy of The Royal Horticultural Society Lily Group www.rhslilygroup.org.

The 'Odd One Out' revisited

In this article, the history of Lilium rhodopaeum *is briefly summarised by the editor, and a novel way of contributing to the conservation of this lily is described by* ***Chris Durdin****.*

In 1952 a Bulgarian botanist, Dr Delipavlov, discovered a lily, which was named *Lilium rhodopaeum* after its home in the Rhodope Mountains. Since its discovery this rare lily has been accorded the status of a protected species.

In his book *Lilies*, Patrick M. Synge includes *L. rhodopaeum* with *Lilium carniolicum*, and the then subspecies of *L. carniolicum*, i.e. subsp. *albanicum*, subsp. *bosniacum* and subsp. *jankae*. From a morphological perspective this categorisation seems myopic, as *L. rhodopaeum*, to quote Derek Fox, has "funnel campanulate" flowers, whereas the flowers of *L. carniolicum* and its subspecies are turkscaps. Perhaps it was geographical proximity that suggested this grouping, as the lilies that look most like *L. rhodopaeum*, i.e. *Lilium monadelphum* and its recognisable relatives, grow hundreds of miles away in NE Turkey and the Caucasus Mountains. It would be useful to apply DNA profiling to resolve this situation, but in the meantime, to quote Derek Fox again, *L. rhodopaeum* "is every inch a cousin of the Caucasian species *L. monadelphum*."

"The Odd One Out" is the title of an article, about *L. rhodopaeum*, written by Derek Fox, in the 1997-1998 issue of *Lilies and Related Plants*. Although never explained in the article, the title could be interpreted as alluding to the geographical isolation of "a cousin" of *L. monadelphum* (and its relatives) in Bulgaria. Whatever the actual meaning of the title, more importantly the author found flowering plants of *L. rhodopaeum* in the Rozen meadows, near the village of Progled, in southern Bulgaria. One of the differences he noted from the Caucasian species was that *L. rhodopaeum* lacked the purple base to the flower, which is typical of *L. monadelphum* and related species, i.e. *Lilium akkusianum*, *Lilium kesselringianum* and *Lilium szovitsianum*. The author also met Dr Delipavlov and, among other things, they discussed the possibility of *L. rhodopaeum* growing over the border in Greece. It is astonishing, to reflect that *L. rhodopaeum* was discovered in Bulgaria in 1952, Synge published *Lilies* in 1980 and Derek Fox wrote his article in the late 1990s and yet the existence of this lily in Greece was yet to be confirmed and recorded.

In the intervening years, since Derek Fox wrote his article about *L. rhodopaeum*, interest in this lily and its conservation has increased. This is easily confirmed by visiting the numerous websites that provide information and stunning photographs of this beautiful lily. The website of the European Nature Information System, EUNIS (http://eunis.eea.europa.eu), for example, shows two sites where

Plants of *Lilium rhodopaeum* growing in a meadow in southern Bulgaria.

L. rhodopaeum can be found in Bulgaria and ironically, given Derek Fox and Dr Delipavlov's uncertainty about this lily's incidence over the border, five sites where *L. rhodopaeum* can be found in Greece.

The other, perhaps surprising, source which has made a contribution to the conservation of *L. rhodopaeum* relates to people with an interest in holidays which involves the study of wild plants and animals. The following is an example of how a holiday company combined providing an enjoyable experience, for its clients, with a significant contribution to the conservation of one of Europe's rarest lilies.

A group from Honeyguide Wildlife Holidays, (www.honeyguide.co.uk), were taken to see *L. rhodopaeum* in southern Bulgaria, in June 2012, by their local guide, Bulgarian botanist Vladimir Trifonov, a.k.a. Vlado.

Group members and Honeyguide leader, Dr Chris Gibson, who is a Principal Advisor for Natural England, thought they'd like to help Vlado and his efforts to conserve *L. rhodopaeum*. The source of funds was through the holiday, as £40 of the price of every Honeyguide wildlife holiday is allocated to a conservation project in the country where the holiday takes place. This goes through the Honeyguide Wildlife Charitable Trust, which enables the holidays' conservation contributions to

Wooded hills and alpine meadows, the typical habitat of *Lilium rhodopaeum*.

be topped up by Gift Aid.

This holiday's donation was already earmarked for the Bulgarian Society for the Protection of Birds (BSPB), the BirdLife partner in Bulgaria, which also has a wider biodiversity remit. The Honeyguide charity was able to double the funds raised by the holiday to a total of £800.

Chris Durdin, proprietor of Honeyguide Wildlife Holidays and Chairman of the Honeyguide Wildlife Charitable Trust, arranged that £500 was sent to BSPB to support the designation of Protected Area Tzigansko Gradishte–a *L. rhodopaeum* site–as part of the Natura 2000 network of internationally important wildlife sites. The money covers travel and communication costs for meeting and getting support from local people and authorities, and for the final public hearing. The balance of £300 was for travel and other expenses for botanist Vladimir Trifonov. Vlado is the botanist who co-leads Honeyguide groups, whose job is 'Chief Expert, Biodiversity and Protected Areas', for Bulgaria's Ministry of Environment and Waters, based at the Ministry's regional inspectorate in Haskovo. He is also the author of the Biodiversity Action Plan for *L. rhodopaeum*: it would be fair to describe him as the local expert. Vlado is monitoring the privately-owned site where the Honeyguide group saw *L. rhodopeaum* in June 2012. That includes clarifying ownership and, it is hoped, arranging management of the meadow.

The following is an extract from a recent report by Vladimir Trifonov:

Lilium Rhodopaeum in the locality of the village of Stoykite, Smolyan Municipality, Bulgaria, 2013

This year the locality of *L. rhodopaeum* was visited on 27 June 2013. This visit was planned in 2012.

The main threats to the population of *L. rhodopaeum* appear to be climate conditions and competition/suppression by False Hellebores. Therefore, the decision was taken to reduce the population of this species by haying. In the summer of 2012 haying was carried out in the meadows where the lilies grow.

The population of *L. rhodopaeum* for 2013 is about 66 individual plants:

- 17 flowering (including three individuals with two flowers and two with three flowers);
- 46 vegetating, i.e. without flowers, (in approximately 10 groups).

When these numbers are compared with the population in 2012, which was about 130 individual plants, there has been nearly a 50% decrease. It may be that this significant decrease is attributable to climate conditions, as the summer of 2012 was extremely dry–to the extent that the lilies did not produce seed. However, it is not uncommon for plants of the lily family to miss seed production for a year or more, when the climate conditions are not suitable.

Unfortunately, it seems that after intervention (haying) the density of False hellebores increased. It is possible the increase is due to the different (more favourable) reaction of the hellebore–to the climate conditions–by comparison with the lilies.

However, it could be that the intervention shows that the numbers of False hellebores were not adversely affected by haying. Perhaps, therefore, this perennial species should be uprooted for better results, but, potentially, that could both disturb and easily damage the already decreasing population of *L. rhodopaeum*.

Status Report by Vladimir Trifonov, September 2013

There are many notable things about *L. rhodopaeum*, e.g. its incredible beauty, it has only been known to science for little more than sixty years, its full distribution wasn't known until comparatively recently and many lily growers would love to have it in their collections, but few actually do. However, perhaps the efforts of Honeyguide Wildlife Holidays–and their clients–to assist the Bulgarian authorities–and experts like Vladimir Trifonov–with the conservation of *L. rhodopaeum* is especially notable, as without its conservation this lovely lily could easily disappear.