



Status of the Rhodopean lily (*Lilium rhodopeum*)

NEAR STOYKITE, SMOLYAN MUNICIPALITY, BULGARIA, 2020 AND 2021

*In this most recent report **Vladimir Trifonov** provides further encouraging updates upon the continuing efforts to conserve the very rare and beautiful *Lilium rhodopeum* in Southern Bulgaria. Since his previous report, in Lilies and Related Plants 2019–2020, the plants have increased significantly in both numbers and floriferousness.*

The locality of the Rhodopean lily was visited twice in 2020 (27.06. and 10.08.2020) and again in 2021 (26.06. and 14.08.2021). In 2020, 369 individuals were identified, 262 of them were flowering and 107 vegetative. Insects or cattle had damaged 36. In comparison, 355 individuals were counted in 2021 with 287 of them flowering and 68 vegetative. Insects or cattle having damaged 15. Of the flowering individuals there were 213 with a single bloom, 35 with 2 blooms, and 14 with 3 blooms in 2020. Whereas 2021 saw 267 with a single bloom, 45 with two blooms, and 9 with three blooms. The ratio of the flowering/vegetative individuals was about 2 (213F/107V) in 2020 and 4.22 (287F/68V) in 2021 (see Table 1, overleaf).

The total population increased by about 90% from 2019 to 2020 (another

‘best year!’ with the highest number of individuals since monitoring began) and stayed relatively stable in 2021 with just a slight fall of about 3% but an increase of almost 10% in flowering individuals. In both years the population of the Rhodopean lily was not impacted by grazing until the end of the flowering season. Grazing started late enough, in August, which is very favourable for the species.

Unfortunately the lilies again failed to form fruit capsules in 2020 but in 2021 seven capsules were recorded. Propagation by seeds is essential for the normal development of populations and so the successful capsule formation is an encouraging sign of stabilisation.

We will continue with our efforts to manage this valuable territory for the Rhodopean lily population.

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Table 1. Results of census studies 2008–2021

YEAR	Number of flowering individuals	Number of vegetative individuals	Ratio of flowering/vegetative individuals
2008	122	66	1.85
2010	96	–	–
2011	145	–	–
2012	78	52	1.50
2013	17	46	0.37
2014	42	11	3.82
2015	41	4	10.25
2016	56	23	2.43
2017	75	34	2.21
2018	117	31	3.77
2019	123	71	1.73
2020	262	107	1.99
2021	287	68	3,43



Above, cattle grazing in the meadow after the lilies had finished for the season.
Opposite, seed capsules from *Lilium rhodopeum* were successfully produced in 2021.

Table 1. Results of census studies 2008–2021

YEAR	Number of damaged individuals	Total number of individuals	Percentage increase/decrease in the total number of individuals (relative to the previous year)
2008	28	188	–
2010	19	96	-48.94
2011	–	145	51.04
2012	–	130	-10.34
2013	–	63	-51.54
2014	15	53	-15.87
2015	14	45	-15.09
2016	5	79	75.56
2017	34	109	37.97
2018	10	148	35.78
2019	30	194	31.08
2020	36	369	90.21
2021	15	355	-3.79