

**Report on the status of the Rhodopean lily (*Lilium rhodopaeum*) in one unprotected locality  
in the Smolyan district, Rhodope Mountains, Bulgaria – 2023 and 2024**

The locality of the Rhodopean lily was visited twice in both 2023 and 2024 (24 June & 20 August 2023 and 22 June & 24 August 2024).

In 2023 the total number of population was 251 individuals, 211 of them are flowering and 40 are vegetative. In 2024, this increased to 691 individuals, 596 of them are flowering and 105 are vegetative.



*Lilium rhodopaeum*: multiple blooms 25 June 2023 and single bloom 22 June 2024.

In 2023, there were 137 flowering individuals with a single bloom, 52 with 2 blooms, and 22 with 3 blooms in inflorescence. In 2024, there were 399 flowering individuals with a single bloom, 127 with 2 blooms, and 60 with 3 blooms in inflorescence.

The ratio of the flowering/vegetative individuals was 5.28 (211F/40V) in favour of flowering ones in 2023, then 5.68 (596F/105V) in 2024.

In 2023, the total population decreased by 59.05%, compared with 2022. In 2024, the trend was a very big increase – by 175.3%, compared with 2023!



A successful summer in 2024.

Insects damaged a total of seven individual plants in 2023 and 30 in 2024.

In both 2023 and 2024 there was no impact of grazing on the population of the Rhodopean lily until the end of the flowering season.

Digging of wild boars was observed in several places in both years, estimated in 2024 as about 10% of the area.

Due to the lack of grazing, Bracken *Pteridium aquilinum* and False helleborine *Veratrum album* increased in 2023 and 2024. In 2024, they covered about 40% of the locality's areas.

Eight fruit capsules of Rhodopean lilies were counted in 2024 (four in 2023).

Despite the established threats, the general condition of the population in the locality is excellent.

**Table 1. Results of census studies 2008-2024.**

Year	Number of flowering individuals	Number of vegetative ind.	Ratio of flowering/ vegetative ind.	Number of damaged ind.	Total number of ind.	Increasing/decreasing of total number of ind. In percentage to the previous year
2008	122	66	1,85	28	188	-
2010	96	-	-	19	96	-48,94
2011	145	-	-	-	145	51,04
2012	78	52	1,50	-	130	-10,34
2013	17	46	0,37	-	63	-51,54
2014	42	11	3,82	15	53	-15,87
2015	41	4	10,25	14	45	-15,09
2016	56	23	2,43	5	79	75,56
2017	75	34	2,21	34	109	37,97
2018	117	31	3,77	10	148	35,78
2019	123	71	1,73	30	194	31,08
2020	262	107	2,45	36	369	90,21
2021	287	68	4,22	15	355	-3,79
2022	356	257	1,39	5	613	72,68
2023	211	40	5,28	7	251	-59,05
2024	596	105	5,68	30	691	175,30



False helleborine *Veratrum album* 22 June 2024; seedheads unsuccessful 20 Aug 2023, and successful 24 August 2024 with Bracken *Pteridium aquilinum* behind.

Vladimir Trifonov, 2023 and 2024. Photos by Vladimir Trifonov.

Reports for 2023 and 2024 combined by Chris Durdin