

# The efforts to preserve the local population of *Parnassius apollo* (Lepidoptera: Papilionidae) in a man-made habitat in Gorski kotar region (Croatia)

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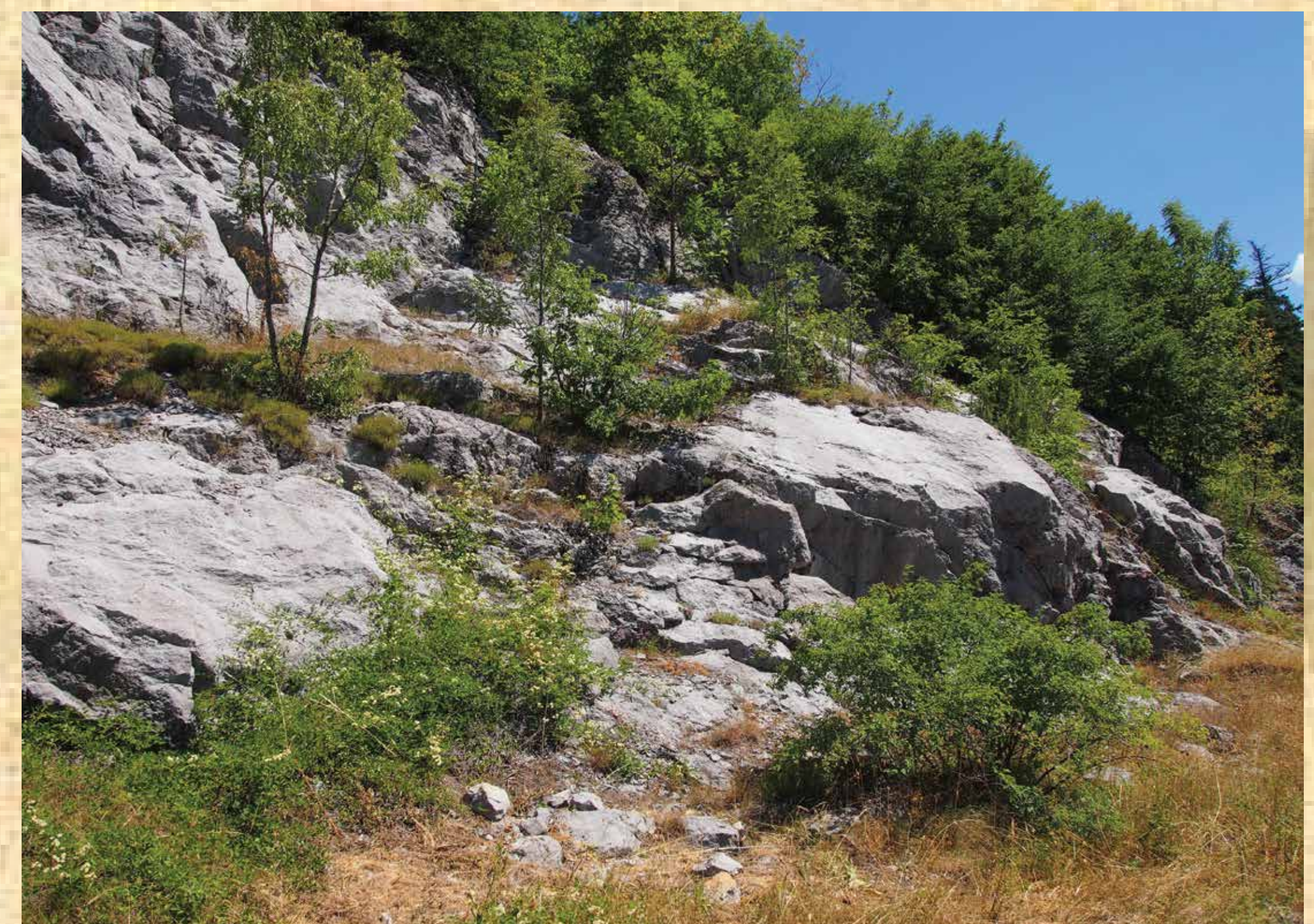
*Parnassius apollo* (photo: Duško Wöfl)



Because it's recognisable appearance Apollo is considered one of most beautiful day butterflies, also a rare and threatened species in Europe and in Croatia.



Mainly it can be found on mountain meadows (at altitudes between 500 - 2500 metres). In Croatia, Apollo inhabits natural habitats of highland areas, although population presented in this poster was found on a man made habitat near the railroad.

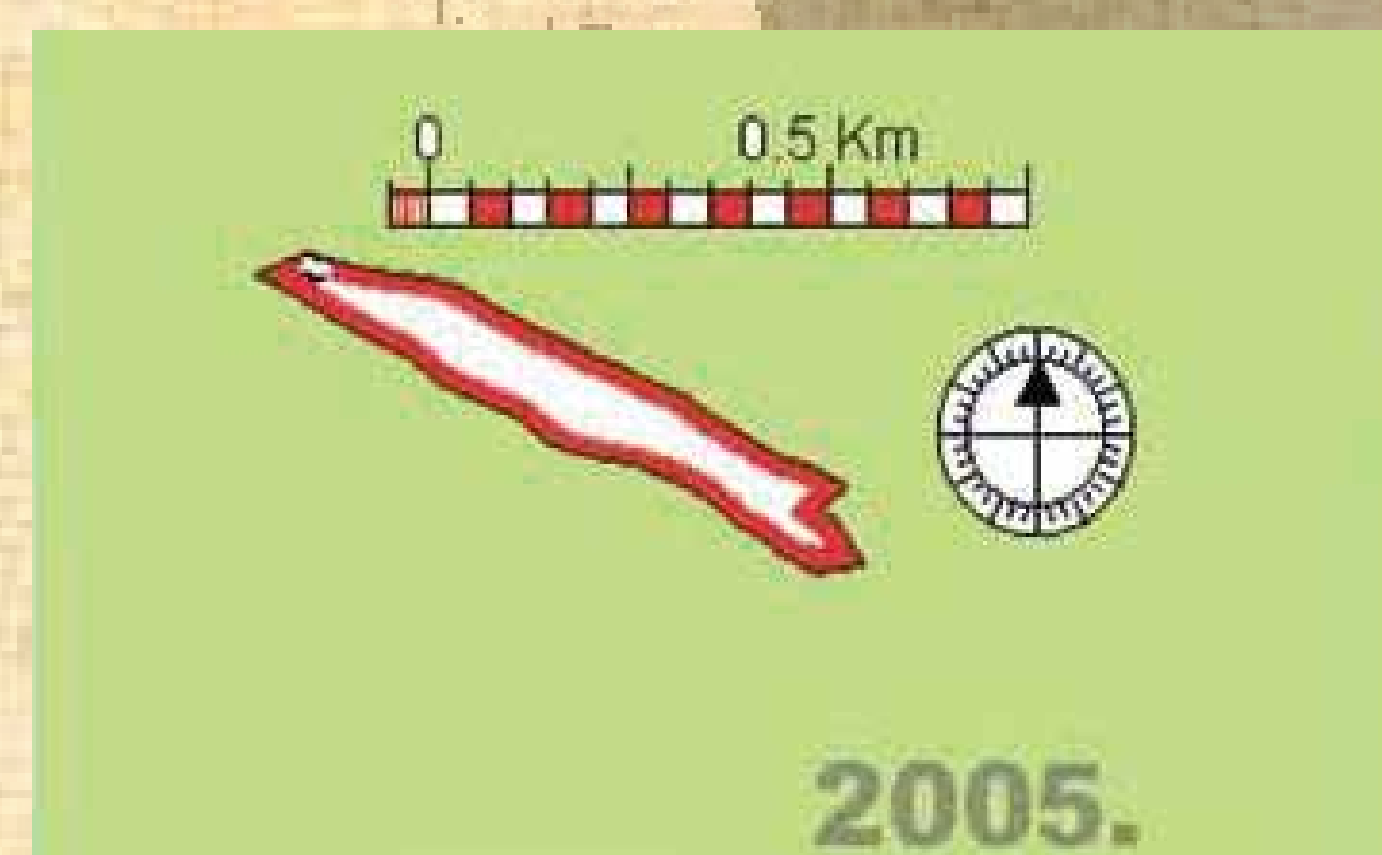


The only remaining habitat in County of Primorje and Gorski kotar (photo: Public institution archives)

## Decline in numbers:



- 30 years ago over 100 butterflies could be found on site during the reproductive season, and in the year 2011, only 10 individuals were found.
- A decline of number of feeding plants (*Sedum spp.*) was also noticed.



*Parnassius apollo* range has been decreasing for the last 30 years (courtesy of Natural History Museum Rijeka)



## Possible causes for decline:

- destruction of habitat due to construction works
- pesticides
- chemical compounds used for railroad maintenance
- manure disposal
- natural succession
- butterfly collectors



## Conservation efforts:

- trees, shrubs and vines were removed from the slope in two separate occasions
- an education project was arranged with local school where they would grow the feeding plants which would then be introduced into the habitat
- population and site monitoring



## Results:

- population still decreasing
- education project was postponed or cancelled because the school principal was told that *Sedum* plants can be poisonous



Feeding plant *Sedum spp.*  
(photo: Public institution archives)



## Conclusion:

To conserve Apollo population few measures should be taken:

- educate local communities and people
- improve collaboration between local enthusiasts and state/public institutions
- find alternative way for railroad maintenance or use of environmental friendly compounds
- establishment of detailed monitoring in collaboration with biology students
- promote the conservation of Apollo butterfly in tourism of nearby villages