

# FIRST RECORD OF *Rhacocleis buchichii* HERMAN 1874 (ORTHOPTERA: TETTIGONIIDAE) IN CROATIAN MAINLAND

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Accepted: October, 2015

*Rhacocleis buchichii* Herman, 1874, which was hitherto only known from two Croatian islands, has been recorded on the Croatian mainland at the lower altitudes of Biokovo Nature Park, in October 2015. Thus this species is not so isolated and may be more widespread in the region than thought before. The adults were photographed for the first time in the field.

## ***Rhacocleis buchichii*, Biokovo Nature Park, first record**

W. WAGNER: Prvi nalaz vrste *Rhacocleis buchichii* Herman, 1874 (Orthoptera: Tettigoniidae) na području kopnene Hrvatske. Entomol. Croat. 2015. Vol. 19. Num 1–4: 37–41.

Vrsta *Rhacolepis buchichii* Herman, 1874., koja je do sada zabilježena samo na dvama hrvatskim otocima, pronađena je i na hrvatskom kopnu na nižim nadmorskim visinama Parka prirode Biokovo u listopadu 2015. Ovaj nalaz upućuje da vrsta nije strogo izolirana te bi mogla biti šire rasprostranjena u regiji nego što se do sada smatralo. Odrasli primjerci fotografirani su po prvi put na terenu.

## ***Rhacocleis buchichii*, Park prirode Biokovo, novi nalaz**

## **Introduction**

*Rhacocleis buchichii* Herman, 1874 has been known so far only from a few individuals from two sites on two Adriatic islands (Hvar and Brač, e.g. Harz, 1969, Karny 1907). There are also unconfirmed hints for Korčula (Skejo, 2014). It is a relatively large representative of the genus *Rhacocleis* Fieber, 1853 (compare Willemse & Willemse 2005) with long, only small, curved and quite slender male cerci which bear a typical, long inner tooth at their basis (see Herman, 1874 and Eades et. al: Orthoptera Species File). Unlike *Rhacocleis germanica* (Herrich-Schäffer, 1840), this species has the tooth directed distinctly downwards.

The species is said to live in low altitude Mediterranean grasslands (up to 50 m above sea level) on Hvar (Skejo, 2014). It is apparently in decline especially due to tourist development and road construction on the two islands. Other causes are

obviously invasive species (mongooses) and ecosystem deterioration (Skejo, 2014). No further details have apparently been published. Furthermore no photos of living individuals were detected in the literature or on the internet.

Thus it was a surprise to detect a population on the Croatian mainland adjacent to the known islands during a short stay in mid-October 2015.



Figure 1. Male



Figure 2. Male, dorsal view



Figure 3. Male cerci



Fig. 4: Female



Figure 5. Female, dorsal view

Figures 1-5: *Rhacocleis buchichii*, all photos Biokovo Nature Park, coordinates see text, October 2015, taken in the field by the author)

## Results and Discussion

### Records

Altogether 15 adults were recorded on 13. 10. 2015 (late afternoon, 10 individuals, NW-part of habitat) and 16. 10. 2015 (morning, 5 individuals, SE-part), six males and nine females, by carefully investigating low-growing vegetation and open soil along the forest road. The animals were photographed in the field (Fig. 1- Fig. 7). The weather was quite sunny on the first date, but rather cloudy on the second.

### Habitat

The new site is located in the southwestern part of Biokovo Nature Park in Central Dalmatia (Croatia) at about 650 meters above sea level (Fig. 8). The habitat is situated along a rough forest road (examined section about 1 km long) through *Pinus nigra* woodland. Coordinates are as follows: N 43.258174, E 17.095698 (center, crossing with Biokovo road) / N 43.255340, E 17.100404 (SE-part) / N 43.259850, E 17.092829 (NW-part). The settled, sunny to semi-shady roadside margins are dominated by young *Pinus* shrub, a few herbaceous perennials, open soil, patchy *Rubus fruticosus* agg. stands and only a few grasses. Most individuals could be found at the borderline of low *Pinus* shrub and the road, but some also in embankments with open soil, stones and dead *Pinus* needles and cones. As companion species, it was mainly *Pachytrachis frater* (Brunner von Wattenwyl, 1882), *Yersinella raymondii* (Yersin, 1860), *Ephippiger discoidalis* Fieber, 1853 and a *Chorthippus* species that were recorded.

### Conclusions

The new site expands the knowledge of the species not only in the respect of distribution, but also in respect of habitat requirements. The site is located at a much higher altitude than the formerly known ones and also in a different type of vegetation. This implies a somewhat larger flexibility in the species' habitat preferences. On the other hand, the ability of dispersion seems to be very low as it is flightless. However, further investigation is required to determine whether the mainland distribution of *R. buchichii* is really restricted to Biokovo.

Though black pine woodlands are not very large-scale in the Biokovo area in general, the relevant type of habitat is not so restricted at the new site. Thus it is probable that the species also occurs outside the examined one kilometer section. It is furthermore not unlikely that other types of habitat could also be used by the species. Due to protection status (Nature Park) and expansion of open *Pinus nigra* woodland especially in the southwestern parts of Biokovo, the new population is probably the most important. But some endangerment factors are obvious, too intense maintenance of the rough forest road on the one hand (e.g. destruction of embankments, radical removal of young *Pinus*) and succession on the other hand (higher growth of the still young *Pinus*) could exacerbate the situation at least in the



Figure 6. Habitat



Figure 7. Habitat

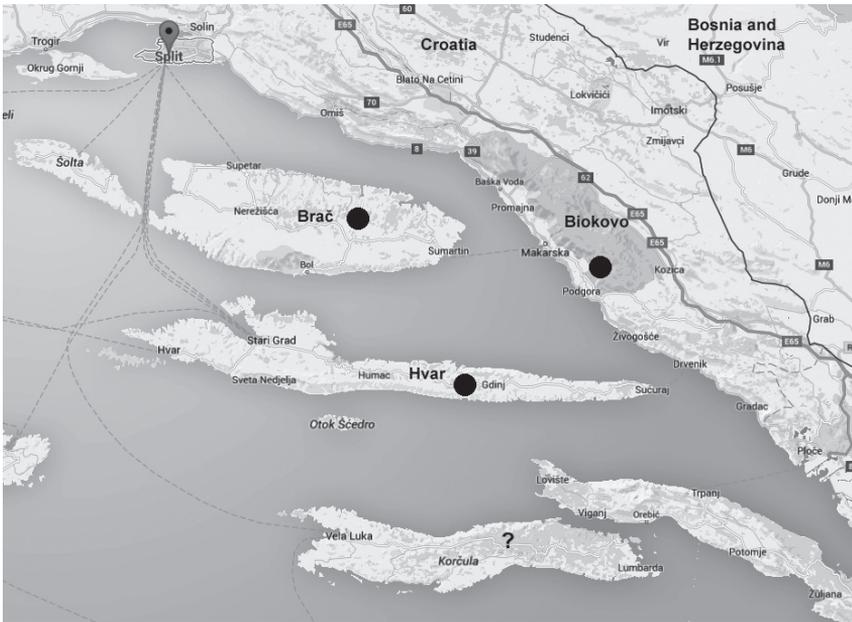


Figure 8. Distribution of *Rhacocleis buchichii* in Croatia southeast of Split. Hitherto only the sites on the islands Hvar and Brač were known (black circles). The site in Biokovo Nature Park in mainland Croatia is new. There are also unconfirmed hints from Korčula (indicated with questionmark). Map based on Google Maps.

known section. Another severe threat is potential forest fires resulting in large scale destruction of the habitat.

It would be interesting to search for the species not only in other parts of Biokovo (in altitudes below 1000 m a. s. l., especially the west side with black pines), but also in the whole of Central Dalmatia. Random sampling during this research

in higher parts of Biokovo and along the coast did not bring positive results. In grasslands of higher elevations (1000–1300 m a. s. l.) of Biokovo, only the congener *Rhacocleis germanica* was recorded. This species was also common in grassy, open *Quercus pubescens* woodland in about 600 m a. s. l. south of Biokovo (Gornje Igrane), here together with *Pachytrachis striolatus* (Brunner von Wattenwyl, 1861).

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