

Rediscovery of *Pieris mannii haroldi* WYATT, 1952 in Northern Middle Atlas, Morocco

(Lepidoptera, Pieridae)

by

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Abstract: During an expedition in Djebel Tazzeke, near Bab Bou Idir, the author photographed a living ♀ of *Pieris mannii haroldi* WYATT, 1952 on May 23rd 2024. Identification was confirmed by ULF EITSCHBERGER. A brief description of the biotope and a short review of the literature on this taxon are provided.

Materials and methods: Surveys focused on butterfly fauna, with an emphasis on burnet moths, were conducted by the author alongside AXEL HOFMANN in northern Morocco from May 18th to 27th 2024. On May 23rd, in the vicinity of Bab Bou Idir (North-eastern Middle Atlas), we examined marly limestone outcrops surrounded by cornfields, which served as a refuge against overgrazing (fig. 1). This biotope, situated at an altitude of 1400 m, was characterized by a dry, patchy grassland covered with flowering *Thymus* sp., and attracting a variety of Lepidoptera, including hundreds of *Pieris rapae mauretanica* VERITY, 1908 (fig. 3). The cornfields were bordered by forested and rocky hills with dry grasslands and clearings of the mediteranen dwarf palm *Chamaerops humilis* (LINNAEUS, 1753) (fig. 2). The author captured images of several *P. rapae* (LINNAEUS, 1758), including one specimen with an unusual pattern similar to *P. mannii haroldi* WYATT (figs. 4-6). Unfortunately, the specimen flew away and could not be captured. No additional imagos, potential host plants, or larvae were found. Upon returning home, the photographs were sent to EITSCHBERGER, who confirmed the identification of a fresh ♀ of *P. mannii haroldi* WYATT.

Discussion: *Pieris mannii haroldi* WYATT was first described based on a comprehensive type series collected on July 6th 1950, on the southern side of Taghzeft Pass at an elevation of 1900 m. The holotype and paratypes are preserved in the WYATT collection at the Staatliches Museum für Naturkunde in Karlsruhe (fig. 7). Previously considered a summer form of the European *P. mannii rossii* (STEFANELLI, 1900), first specimens of this taxon were collected around Aguelmame de Sidi Ali by HAROLD POWELL in 1923. The taxon *P. m. haroldi* WYATT exhibits several distinguishing characters when compared to the European Spanish populations of *P. mannii* (MAYER, 1851): a larger average size, a pure white ground colour, especially on the underside (as opposed to yellowish), significantly reduced basal black suffusion on the underside, and smaller, more distinctly defined black spots at the apex of the forewings in ♀♀. Subsequent captures in good numbers were made between Tizi Taghzeft and Aguelmame de Sidi Ali, consistently during the summer, notably by GUY BARAGUÉ, JEAN GALLET, GERHARD HESSELBARTH, ABDELAZIZ MOKHLES, CHARLES RUNGS and JEAN-CLAUDE WEISS. The last two specimens were said to have been collected by MICHEL TARRIER in August 1999. Reports by HENRI DE TOULGOËT (1966) and JOSEF DE FREINA (1975) from the High Atlas were later invalidated due to misidentifications. The taxon *P. m. haroldi* WYATT has been mentioned in several publications (unexhaustive list): EITSCHBERGER & STEININGER, 1973; TENNENT (1996); TARRIER (2008). Currently, after decades of severe overgrazing in the Middle Atlas, all known localities have been completely and irreversibly destroyed. As a result, *P. m. haroldi* WYATT was presumed to be nearly extinct following extensive efforts to locate new colonies. However, this recent discovery, along with potential habitats identified in the Rif Mountains (HERMANN FALKENHAHN, pers. com.), offers renewed hope that the taxon may persist in small populations. Furthermore, Morocco may have recently been significantly unattracted by lepidopterists, largely due to the widespread destruction of its biotopes. The species' flight period in the late summer months in conjunction with its rough morphological resemblance to *P. rapae mauretanica* VERITY, may also contribute to its underreporting. The present rediscovery and first photograph of a living specimen was achieved by chance. Therefore, many questions remain unresolved: the molecular status of this taxon, its local host plant(s), the morphology and behavior of preimaginal stages, and whether it produces a single summer generation or potentially multiple generations. Further investigations are planned for the coming year at the newly identified locality.

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Fig. 1: Biotope in the vicinity of Bab Bou Idir (Northeastern Middle Atlas) where *Pieris mannii haroldi* WYATT, 1952 was found nectaring on May 23rd 2024.



Fig. 2: General view of the biotope and its surroundings in the vicinity of Bab Bou Idir (Northeastern Middle Atlas) on May 23rd 2024. In the foreground is the Mediterranean fan palm *Chamaerops humilis* (LINNAEUS, 1753) dominating.



Fig. 3: Summer habitus of *Pieris rapae mauretunica* VERITY, 1908, ♀, flying together with *P. mannii haroldi* WYATT, 1952. Vicinity of Bab Bou Idir (Northeastern Middle Atlas), May 23rd 2024.

Fig. 4-6: *Pieris mannii haroldi* WYATT, 1952, ♀ nectaring on *Thymus* sp. Vicinity of Bab Bou Idir (Northeastern Middle Atlas), May 23rd 2024.

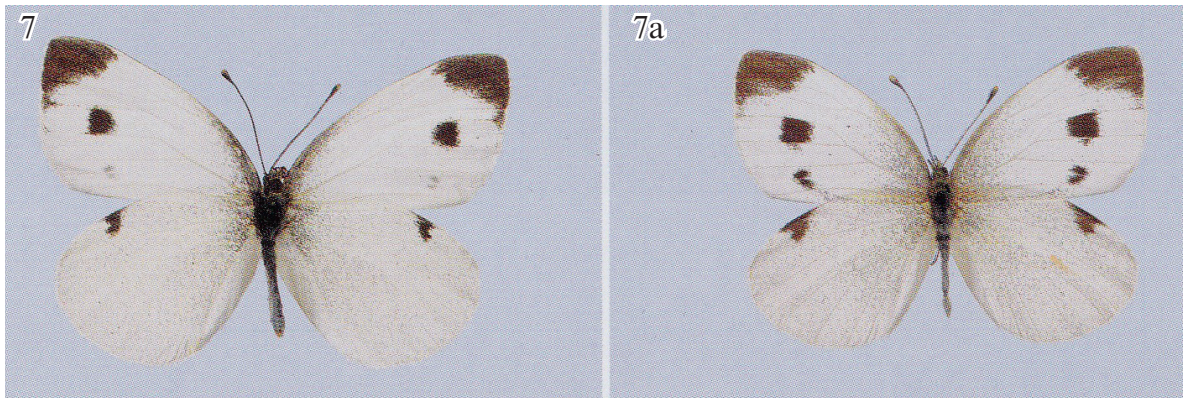


Fig. 7, 7a: Holotype ♂ (left) and allotype ♀ (right) of *Pieris mannii haroldi* WYATT, 1952 – photos ex ZIEGLER & EITSCHBERGER (1999, Farbtafel VII: 16, 17, slightly modified). Taghzeft-Paß, Südseite, Mittlerer Atlas, 1900 m, 6.VII.1950. Coll WYATT in „Staatliches Museum für Naturkunde, Karlsruhe”.

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