Boletín de la Sociedad Española de Briología. vol 58 (2024): inv.32.50.001
doi: 10.58469/bseb.inv.2024.32.50.001

HYBRID RARE MOSS *CINCLIDOTUS ×VIVESII* (POTTIACEAE) REPORTED FROM A SECOND LOCALITY

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ABSTRACT: A new record for the moss *Cinclidotus ×vivesii* Ederra is reported in the main course of the Llobregat river (Barcelona). So far, the Font Gran de Cercs was the only known locality. The data provided reveal a certain dispersion of the taxon, new data on its habitat and effectively initiates its extended discovery phase.
Key words: Bryophytes, mosses, new record, Iberian Peninsula

REPORTADA UNA SEGUNDA LOCALIDAD DEL MUSGO HÍBRIDO CINCLIDOTUS XVIVESII (POTTIACEAE)
RESUMEN: Se aporta una segunda localidad para el musgo *Cinclidotus ×vivesii* Ederra, que hasta el momento solo se conocía en la Font Gran de Cercs (Barcelona), en el curso principal del río Llobregat. Los datos aportados revelan cierta dispersión del taxon, nuevos datos sobre su hábitat e inician la fase de descubrimiento extendido del mismo.
Palabras clave: Briófitos, musgos, novedades corológicas, península Ibérica

INTRODUCTION

During the "Monitoring and control program of the river basin district of Catalonia for the period 2020-2024" (*Programa de seguiment i control*, abbreviated as PSIC), 356 control stations of Catalonia's main basins were sampled in order to determine different macrophytes-based water quality indexes. A *Cinclidotus* specimen was collected as a macrophyte sample at one of the control points along the Llobregat river and it was later identified as *C. ×vivesii* Ederra.

Cinclidotus ×vivesii is a rare moss that was described as a species (Ederra & Guerra, 2005) and later reported as an interspecific hybrid between *Cinclidotus aquaticus* (Hedw.) Bruch & Schimp. and *Cinclidotus riparius* (Host ex Brid.) Arn. (Guerra et al. 2021).

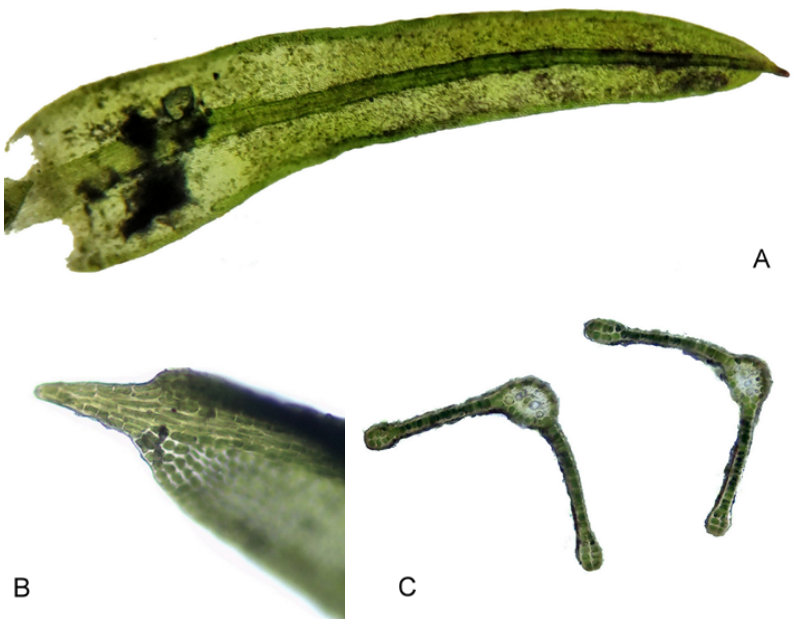

Figure 1. *Cinclidotus* ×*vivesii* (from MUB 62782).
A: Leaf showing the thickened margin and the costa ending in a short mucro.
B: Detail of leaf apex. C: Leaf cross sections.

RESULTS AND DISCUSSION

Cinclidotus* ×*vivesii Ederra, Nova Hedwigia 81: 472. 2005 (pro sp.)

Barcelona, Guardiola de Berguedà, Llobregat river, downstream of the Baga del Collet bridge, UTM: 31TDG06737448, 700 msl, on the riverbed's rocks, underwater for at least a part of the year, *C. Pedrocchi-Rius & M. Jover Benjumea*, 3 July 2023 (MUB 62782).

This is the second known locality for this taxon. The specimen is characterized by long lanceolate leaves with a stout costa ending in a short mucro. The leaf margins are pluristratose and confluent with the costa at the apex. The internal cells of the leaf margins are not distinctly differentiated from the superficial ones (Fig. 1). More differential characters are found in Ederra (2006).

The collected moss was growing in the middle and upper area of the boulders in the riverbed, which are frequently submerged depending on the variations in flow (Fig. 2).

Different parameters of the river water were measured at the sampling initial point at the date of collection, revealing some alkalinity (pH = 8.53) and a relatively high conductivity (627 µS/cm). Although the new locality is close to the *locus classicus* (Fig. 3), both are located upstream from the point of confluence of the two water courses.

So far, Font Gran in Cercs was the only known locality of *C.* ×*vivesii*. According to Ederra & Guerra (2005), "La Font Gran" is the only reference to the locality of the original voucher (BCB 35184), which could refer to both the spring located on the northern bank of the Torrent de les Garrigues, as well as to the picnic area that has the same name and is crossed by the Torrent de les Garrigues. Later, Ederra (2006: 260) noted that the Font Gran stream has an abundance of moss, even though this stream is referred to as the Torrent de les Garrigues on topographic maps of Catalonia (ICGC, 2024). Finally, in accordance with data provided by collector, the Font Gran sample examined in Guerra et al. (2021) was collected in the Torrent de les Garrigues, in the section that crosses the Font Gran picnic area.

The species *C.* ×*vivesii* Ederra was classified as being in critical risk (CR) on the Red List of Threatened Bryophytes in Spain (Brugués & González-Mancebo, 2014).

Species discovery is a process that exceeds its mere description (Goowing et al. 2020) and that can take very long periods of time. The finding of a second locality is a significant milestone towards a more complete understanding of this rare moss.

Figure 2. Locality where *C.* ×*vivesii* was collected in the Llobregat River.

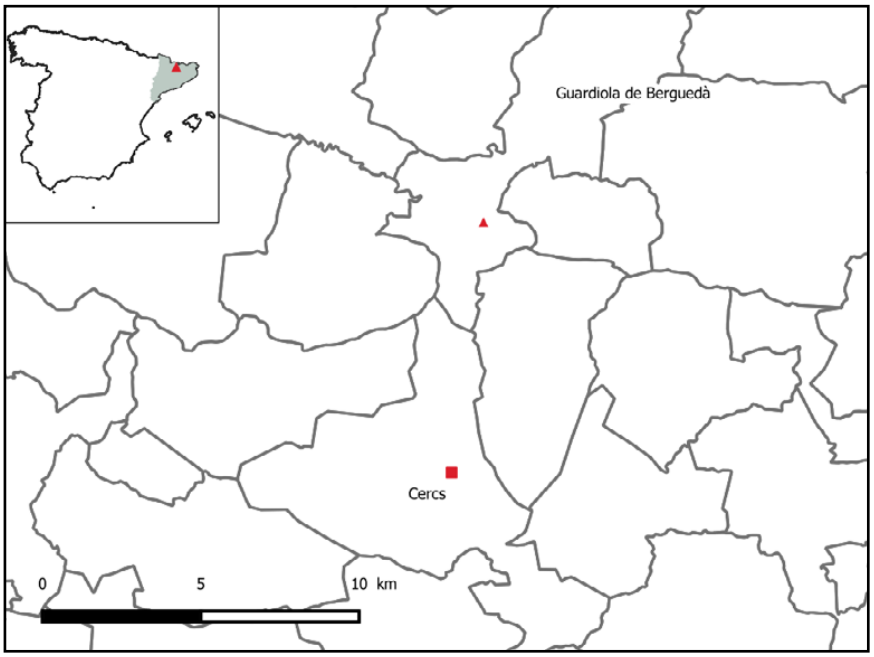

Figure 3. Distribution of *C.* ×*vivesii* on a municipal map (square: *locus classicus*, triangle: new locality)

ACKNOWLEDGEMENTS

We are grateful to Juan Guerra for the confirmation of the taxon identification and to Miquel Jover for his sample collection assistance. This research was supported by the Catalan Water Agency (*Agència Catalana de l'Aigua*, abbreviated as ACA) and carried out by EUROFINS IPROMA, SLU.

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