

***PHELIPANCHE CERNUA* POMEL (*OROBANCHACEAE*), A
PRIORITY NAME FOR THE WESTERN MEDITERRANEAN
SPECIES RECENTLY REDESCRIBED AS *PH. INEXSPECTATA***

Luis CARLÓN RUIZ¹, Manuel LAÍN Z GALLO², Gonzalo MORENO MORAL³ &
Óscar SÁNCHEZ PEDRAJA⁴

¹ Jardín Botánico Atlántico, Avda. del Jardín Botánico 2230. E-33394 Gijón (Asturias).
lcarron@hotmail.com

² Colegio de la Inmaculada, Avda. Hermanos Felgueroso, 25. E-33205 Gijón (Asturias).
mlainzg@yahoo.es

³ Santa Clara, 9-1º dcha. E-39001 Santander (Cantabria). xlcltb@aemet.es

⁴ E-39722 Liérganes (Cantabria). osanchez@farmalierganes.com

ABSTRACT: The specific parasite of *Lactuca* (*Compositae*) described in 2005 from the Iberian Peninsula as *Phelipanche inexpectata* (*Orobanchaceae*) and known so far in northeastern Spain and southern France, is shown to also occur in mountain areas of northern Africa, where it had been previously described under the neglected name *Phelipanche cernua*. Given the recent proposal to consider the aforementioned *Lactuca* parasite a mere variant of *Phelipanche schultzii*, we stress the neat differences between both species. **Key words:** *Phelipanche inexpectata*, *Ph. cernua*, *Ph. schultzii*, holoparasitic *Orobanchaceae*, *Lactuca*, Algeria, France, Morocco, Spain.

RESUMEN: *Phelipanche cernua* Pomel (*Orobanchaceae*), un nombre prioritario para la especie del Mediterráneo Occidental recientemente descrita como *Ph. inexpectata*. Se dan pruebas de que la parásita específica de *Lactuca* (*Compositae*) descrita en 2005 de la Península Ibérica como *Phelipanche inexpectata* (*Orobanchaceae*), y conocida hasta ahora del noreste de España y el sur de Francia, alcanza las montañas del norte de África, de las que ya había sido descrita bajo el nombre *Phelipanche cernua*. Dada la reciente afirmación de que dicha parásita de *Lactuca* es una mera variante de *Phelipanche schultzii*, recalamos las netas diferencias entre ambas especies. **Palabras clave:** *Phelipanche cernua*, *Ph. inexpectata*, *Ph. schultzii*, *Orobanchaceae* holoparásitas, *Lactuca*, Argelia, España, Francia, Marruecos.

In 2005, having given up identifying it with any of the taxa admitted by BECK (1890; 1930), we decided to publish under the name *Phelipanche inexpectata* a parasite of *Lactuca* (*Compositae*, *Cichorieae*) readily distinguished by the following features: ± ashy blue plants with greyish pale blue, somewhat humped and ± geniculate corollae; yellow stigma; longly triangular but not distally filiform ca-

lyx teeth; usually lax inflorescence in the upper half of firm stems with few and short if any branches (CARLÓN & *al.*, 2005 a: 12).

By the time of its description, the plant was known from several localities throughout the northeastern quarter of Spain, from the provinces of León and Madrid to the coasts of Catalonia. Further field and herbarium surveys and data provided by

French colleagues allowed us to greatly increase the known range of the species, which has resulted to be widespread in southern France (CARLÓN & al., 2008: 31-35).

As we will summarise here, evidence has now arisen for its occurrence in North Africa, and with it a major nomenclatural discovery: the species had been validly published and named from Algerian material already in 1874. The type specimen of *Phelipanche cernua* (Algeria, Tlemcen, “G[har] Rouban”, A. Pomel, Herb. Maire, MP U008206, fig. 1) is in full accordance with *inexpectata* both in its overall appearance and in its preserved morphological details, and nothing in Pomel’s description is unapplicable to the latter. In addition, the host presumed by Pomel (“*Sur Chicoracées?*”) strengthen the taxonomic identity between the Algerian plant and the well known Spanish and French *Lactuca* parasite.

BATTANDIER (1890: 658) compared Pomel’s type specimen with that of “*Orobanche fraasii*” and concluded that both were conspecific. Consequently, Maire labelled Pomel’s type specimen as “*Orobanche lavandulacea* Rchb. ssp. *Fraasii* (Walp.) Batt.”. However, and although we haven’t seen its type, judging by F. W. Schultz’s protologue in *Flora* 26: 127-128 (1843) [“calyce (...) dentibus e lata basi lanceolatis, acutis; corolla calyce triplo longiore, tubulosa, subhorizontaliter patente (...) In *Psoralea bituminosa*”], *fraasii* is likely a mere synonym of typical *Ph. lavandulacea*, in which case Battandier’s synonymization can be straight away discarded: unlike Pomel’s specimen, *lavandulacea* is an *Aspalthium bituminosum* parasite with usually stouter, hairier and much more branched stems, deep blue and very slightly curved flowers and short, abruptly subulate calyx teeth (CARLÓN & al., 2008: 85, 92). BECK (1890: 70; 1930: 92), on his part, considered *Ph. cernua* as a mere variation of *Ph. nana* with particularly curved flowers; but it suffices to

compare with the type of *nana* the long triangular calyx teeth and the robust stem of Pomel’s specimen to grasp the inconsistency of this judgment.

The incompleteness of Pomel’s description and the limitations imposed by the study of dry material prevented us from checking if some of the most characteristic traits of the European plant, particularly the yellow stigma, are shared by their African putative relatives. But some color pictures recently taken in the Moroccan Middle Atlas by J. Quiles (who has been kind enough to allow us to publish one of them as fig. 3) show beyond any doubt that plants conspecific with *Ph. inexpectata* occur in North Africa, and confirm a piece of evidence that, already found in 2007, caution prevented us from publishing until utter proof could be gathered: a specimen in Maire’s herbarium in MPU [Algeria, Atlas de Blida, 1-VI-1913, R. Maire (sub “*Phelipaea* aff. *lavandulacea*”))] is readily referable to the European *Lactuca* parasite —only the host indication (“*sur Picridium vulgare*”) casting some doubts, though it’s true that neither a misidentification of a maybe flowerless host nor wider parasitic abilities of the species within Cichorieae can be dismissed.

Phelipanche cernua Pomel in Bull. Soc. Climatol. Alger 11: 105 (1874)

= *Ph. inexpectata* Carlón, G. Gómez, M. Lainz, Moreno Mor., Ó. Sánchez & Schneew. in Documentos Jard. Bot. Atlántico (Gijón) 3: 12[-17], 14 t. 2 [illustration with analysis], 16 t. 3 [phot.], 60 f. 3 [ITS analysis] (2005 [June 2005])

– *Orobanche lavandulacea* auct., non Rchb., Iconogr. Bot. Pl. Crit. 7: 48, t. 697 (1829)] (cf., v. gr., Battandier, 1890: 43-44)

– *O. fraasii* auct., non F.W. Schultz, *Flora* 26: 127 (1843 [28 Febr. 1843]) (cf., v. gr., Maire in sched. et Battandier, 1890: 44)

Ind. loc.: “*Sur Chicoracées?* Garrouban [Mounts of Ghar-Rouban, 34° 36' N, 1° 46' W, province of Tlemcen (which under the French domain made part of the Oran department), Algeria]”.

Holotype (Rec. 9A.4 in Vienna Code, unchanged in the coming Melbourne ICN): A)

"*Phelybanche cernua* Pom / G. Rouban [m. Pomel]"; A) "Université d Alger / Herbar de l'Afrique du Nord / *Orobancha lavandulacea* Rchb. / ssp. *Fraasii* (Walp.) / = *Phelipaea Fraasii* Walp. / = *Phelipaea cernua* Pomel! (Type!) / O[ran]. Ghar Rouban / leg. A. Pomel [m. Maire]" (MPU 008206 - hb. Pomel [the sheet contains only one specimen])

Those authors who still refuse to admit *Phelipanche* as a separate genus would have to coin a *nomen novum* under *Orobancha* in order to preclude homonymy with *Orobancha cernua* L. in Loefl., Iter Hispan.: 152 (1758). However, the main advocates of a wide concept of *Orobancha* don't seem eager to validate this necessary substitutive name, specially if they agree with us for once and accept that the types of *Ph. cernua* and *Ph. inexpectata* are conspecific. The reason is that they consider the latter to be a mere synonym of "*Orobancha schultzei*" (DOMINA & RAAB-STRAUBE, 2009), a serious misconception that the following key and fig. 5 attempt to debunk.

► Calyx teeth longer than the tube but never prolonged in a capillaceous tip and much shorter than the corolla, which is uniformly pale greyish blue and has convergent and entire lower lip lobes; stigma ± yellow; non-stout plants with never too dense and often noticeably lax inflorescences *Phelipanche cernua*

► Calyx teeth much longer than the tube and prolonged in a capillaceous tip that may almost equal the corolla, which is purple with distinctly darker veins and has divergent and neatly toothed or apiculated lower lip lobes; stigma white, seldom creamy; stout and often remarkably tall plants with long crowded inflorescences *Phelipanche schultzei*

In addition to all these morphological traits, both species display neat differences in their ecology and distribution. *Ph. cernua*, as shown in fig. 6, doesn't avoid comparatively cool regions around the western Mediterranean, occurring more frequently in continentalized mountain areas, and is always parasitic on Cicho-

rieae, mainly if not only *Lactuca viminea* and *L. perennis*; whereas *Ph. schultzei* is a more thermophilous species widespread in warm lowlands around the southern half of the Mediterranean Basin (significantly unfound in France) and very rare in inland and mountain areas. Although many species belonging to different families have been cited as hosts for the latter, starting from the uncertain statement in Mutel's protologue ["parmi des Legumineuses, probablement sur le *Scorpiure rude*"], such indications must be attributed to erroneous identifications of the parasite, its host or both. Actually, when the haustoria are digged out a much sounder host specificity arises, and tall Apiaceae of the genera *Distichoselinum*, *Elaeoselinum*, *Ferula* and *Thapsia* are to be considered the true hosts of the species.

REFERENCES

- BATTANDIER, J.A. (1890) Orobanchées Jussieu. In J.A. BATTANDIER & L.C. TRABUT (1888-1897) Flore de l'Algérie. Vol. 1: 655-664. Alger & Paris.
- BECK, G. (1890) *Monographie der Gattung Orobancha*. Biblioth. Bot. 19. T. Fischer. Kassel.
- BECK, G. (1930) IV. 261. Orobanchaceae. In A. Engler (ed.) *Das Pflanzenreich. Regni Vegetabili Conspectus*. IV. 261: 1-348. W. Engelmann. Leipzig.
- CARLÓN, L., G. GÓMEZ CASARES, M. LAÍNIZ, G. MORENO MORAL, Ó. SÁNCHEZ PEDRAJA & G.M. SCHNEEWEISS (2005a) Más, a propósito de algunas *Orobancha* L. y *Phelipanche* Pomel (Orobanchaceae) del oeste del Paleártico. *Docum. Jard. Bot. Atlántico* 3: 1-71.
- CARLÓN, L., G. GÓMEZ CASARES, M. LAÍNIZ, G. MORENO MORAL, Ó. SÁNCHEZ PEDRAJA & G.M. SCHNEEWEISS (2005b, continuously updated) *Index of Orobanchaceae*, <http://www.farmaliernas.com/otrospdf/publica/orobanchaceae%20index.htm>. (accessed 13-XII-2012).
- CARLÓN, L., G. GÓMEZ CASARES, M. LAÍNIZ, G. MORENO MORAL, Ó. SÁNCHEZ PEDRAJA & G.M. SCHNEEWEISS

Phelipanche cernua, a priority name for *Ph. inexpectata*

(2008) Más, a propósito de algunas *Phelipanche* Pomel, *Boulardia* F.W. Schultz y *Orobancha* L. (Orobanchaceae) del oeste del Paleártico. *Docum. Jard. Bot. Atlántico* 6: 1-128.

DOMINA, G. & E. RAAB-STRAUBE (2010)
Orobanche schultzii. Orobanchaceae. In:

Euro+Med Plantbase - the information resource for Euro-Mediterranean plant diversity. ww2.bgbm.org/EuroPlusMed/PTaxonDetail.asp?NameId=26170&PTRefFk=7500000 (accessed 21 November 2012).

(Recibido: 16-I-2013. Aceptado: 30-I-2013)

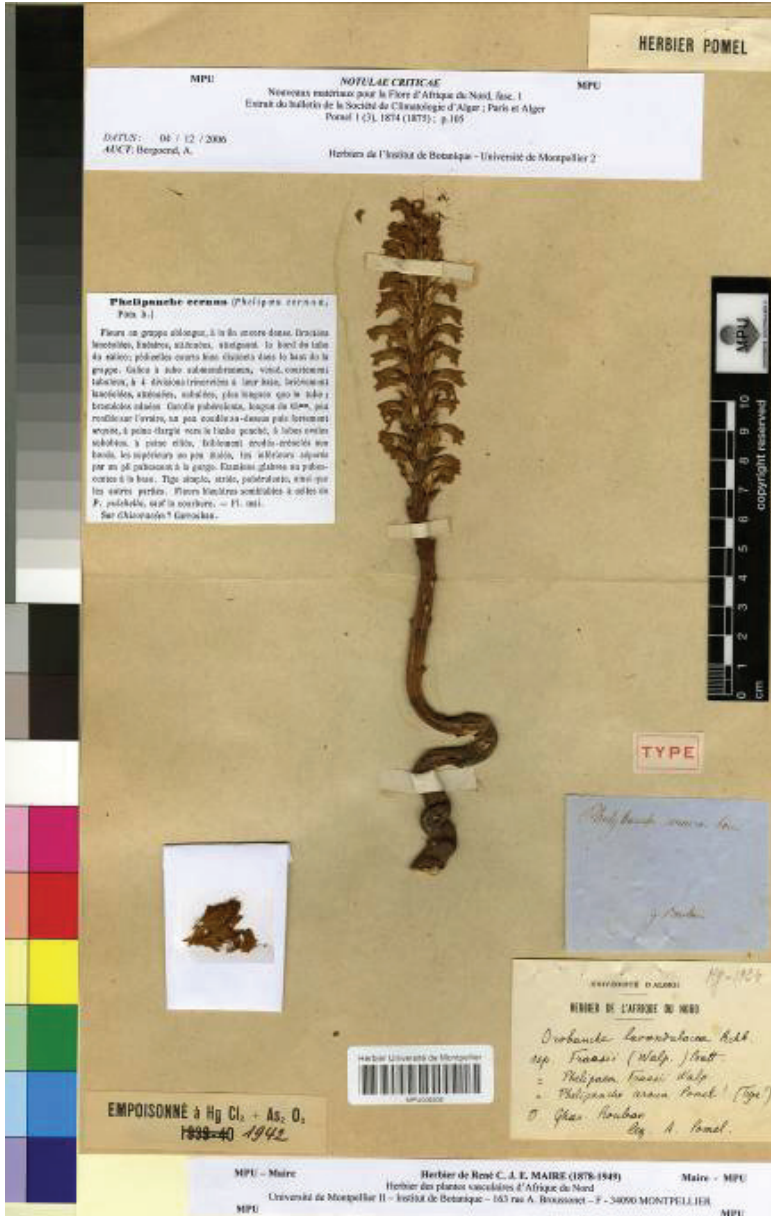


Fig. 1.- Type of *Phelipanche cernua* Pomel, preserved in MPU-Maire (MPU008206).



Fig. 2.- *Phelipanche cernua* Pomel: Spain, Region of Aragón, province of Teruel, 40° 25' 46'' N 1° 24' 59'' W, by the remains of Santa Croche's Castle –municipality of Albarracín–, stony road-sides by *Lactuca* sp., 1100 m, 4-VI-2007, G. Gómez Casares & G. Moreno Moral MM0080/2007 (herb. Sánchez Pedraja 12907).



Fig. 3.- *Phelipanche cernua* Pomel: Morocco, Region of Meknès-Tafilalet, province of Khénifra, 32° 58' 09,60'' N 5° 03' 30,70'' W, 3 km south of the Col du Zad –near Ait Oufella–, *Cedrus atlantica* woodland, 1960 m, 12-VI-2011, J. Quiles Hoyo phot.



Fig. 4.- *Phelipanche cernua* Pomel. Photograph *in vivo* of the plants in the fig. 2, by G. Moreno Moral.



Fig. 5.- Lateral views of calyx and corolla. **A.** close-up of the type of *Phelipanche cernua* (see fig. 1). **B.** close-up of the type of *Phelipanche schultzei*: Annaba, Algeria [herb. Mutel, MHNGr. 1849 (GRM)]. **C.** *Ph. cernua* from San Martín de Ubierna (Burgos, Spain) 42° 28' 39'' N 3° 41' 38'' W, 918 m, parasitic on *Lactuca viminea* (L.) J. & C. Presl in limestone and grassy slopes, Ó. Sánchez Pedraja & M. Tapia Bon SP0035/2007, 23-VI- 2007 (herb. Sánchez Pedraja 12919). **D.** *Ph. schultzei* from the bed of the stream Breña (near Alhaurín de la Torre, Málaga, Spain), 36° 38' 53'' N 4° 10,67 m 41'' W, 250 m, parasitic on *Distichoselinum tenuifolium* (Lag.) García Martín & Silvestre, G. Gómez Casares & G. Moreno Moral MM0060/2004, 12-IV-2004 (herb. Sánchez Pedraja 11774). The graphic scale is strictly referable only to the two lower pictures.

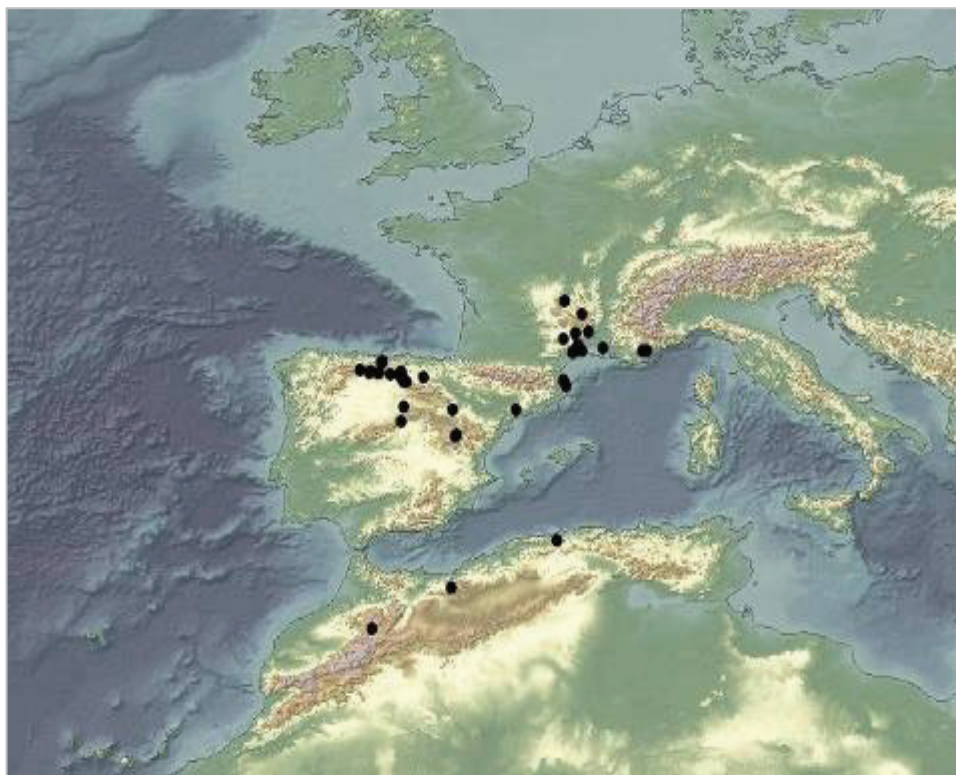


Fig. 6.- Currently known distribution of *Phelipanche cernua*, based on the data compiled in the on-line index developed by Ó. Sánchez Pedraja (CARLÓN & *al.*, 2005b onwards) plus the three African localities cited in the text and the northernmost French locality (Limagnes, Puy-de-Dôme), kindly communicated by Christophe Hennequin. Prospecting efforts are obviously biased, and dots are concentrated in northern Spain and southern France likely as a result of our own place of residence, our thorough review of MPU materials and our fluent communication with French botanists.