

JOLANTA MARCINIUK*,
PAWEŁ MARCINIUK*, BOHUMIL TRÁVNÍČEK**

*Department of Botany, University of Podlasie, Prusa 12, 08-110 Siedlce, Poland

**Department of Botany, Palacký University, Faculty of Science, Svobody 26, CZ-771
46 Olomouc, Czech Republic

Taraxacum species of Central and Western Roztocze, and of adjacent areas

Gatunki rodzaju *Taraxacum* Roztocza Środkowego i Zachodniego
oraz terenów przyległych

SUMMARY

In this paper, the results of studies on distribution of *Taraxacum* species in previously un-studied region of Central and Western Roztocze, and in the adjacent areas of Biłgoraj Plain, and Zamość Hollow. The results include 34 localities of 23 dandelion species belonging to 2 sections: *Erythrosperma* – 1 species, and *Ruderalia* – 22 species. Additionally, for the new in Poland *Taraxacum tanyphyllum* Dahlstedt, description and illustration of a herbarium specimen are included.

STRESZCZENIE

W pracy przedstawiono wyniki badań nad rozmieszczeniem gatunków rodzaju *Taraxacum* na zupełnie niezbadanym pod tym względem obszarze Roztocza Środkowego i Zachodniego oraz przyległych terenów Równiny Biłgorajskiej i Padołu Zamojskiego. Podano 34 stanowiska 23 gatunków mniszków z 2 sekcji: *Erythrosperma* – 1 gatunek i *Ruderalia* – 22 gatunki. Dla *Taraxacum tanyphyllum* Dahlstedt, który jest gatunkiem nowym dla Polski, zamieszczono jego charakterystykę oraz ilustrację okazu zielnikowego.

Key words: *Taraxacum*, *Asteraceae*, chorology, Roztocze region, Poland

INTRODUCTION

The present knowledge of distribution of small *Taraxacum* species, despite wide studies carried out over the recent years (Białasz & Głowacki 1999, Głowacki & Øllgaard 1999, Øllgaard et al. 2000, 2002a, 2002b, Głowacki & Czarna 2003, Grużewska 2004, Głowacki et al. 2005, Trávníček et al. in press.), remains very incomplete, and still insufficient. Relatively well explored areas include: South Podlasie Lowland, eastern part of Central Mazovia Lowland, Cracow Gate, central part of Silesian Upland, northern part of South Wielkopolska Lowland, and north-western part of the Szczecin Coast. In the other regions, only scarce single localities are known, or any data are lacking (Głowacki 2004). South-eastern Poland belongs to such disregarded areas. To fill, at least partly, this gap, the authors of the present study in May 2003 undertook a taraxacological survey in the Roztocze. The collected herbarary material was used for analysis, the results of which are hereby presented.

MATERIAL AND METHODS

The study was carried out mainly in Western and Central Roztocze (Fig. 1), and in the adjacent areas: Biłgoraj Plain, and Zamość Hollow (Kondracki 2002). For the survey, 15 sites of varied environmental conditions were selected: wet and humid meadows, forest borders, and wastelands.



Fig. 1. Location of the area studied

These sites were described with detailed geographic coordinates, using GPS, and additionally were related to a nearby village or other distinct point on the tourist map of Central Roztocze (Roztocze Środkowe, Tourist map. Kartpol, Lublin, 2002). Position of each site in the ATPOL grid (Zajac & Zajac 2001) was also given, with 1 km² accuracy. At each locality, we attempted to collect blooming specimens of each distinct morphological type. A total of several dozens of herbarium sheets were collected. Up till now, about 30% of the collection has been identified. The identified species belong to 4 sections: *Taraxacum vindobonense* Soest of section *Palustria* – localities of this species were already previously published (Marciniuk & Marciniuk 2006); at least 5 species of section *Borea* that require further comparative studies, and presented in this paper species of sections *Erythrosperma* and *Ruderalia*. Most of the herbarium material was identified by the third author (B. Trávníček), some of them were identified or confirmed by H. Øllgaard, who also confirmed single identifications by Z. Głowacki, T. Gruzewska and J. Marciniuk. In the present paper, the localities of specimens identified by H. Øllgaard with a question mark were also included. For *Taraxacum tanyphyllum* Dahlstedt, which is probably a new species in Poland, a brief description was added, and a photograph of a herbarium specimen. The herbarium material was deposited in herbarium of the University of Podlasie in Siedlce (WSRP).

LIST OF SPECIES

sect. *Erythrosperma* (H. Lindb.) Dahlst.

Taraxacum scanicum Dahlst. s.l.

- Tereszpól Kukielki, 50°32'56,3"; 22°56'12,5", **GF0038**, humid pasture, 13.05.2003, leg. J. and P. Marciniuk, det. J. Marciniuk, conf. H. Øllgaard 2006 (veris.).

sect. *Ruderalia* Kirschner, H. Øllg. et Štěpánek

Taraxacum amplum Markl.

- Żurawnica, 50°33'15,6"; 22°57'52,2", **GF0130**, wasteland at the Wieprz River bank, 13.05.2003, leg. J. and P. Marciniuk, det. B. Trávníček 2005.
- Zwierzyniec, 50°36'37,4"; 22°57'24,6", **GE9170**, meadow, 13.05.2003, leg. J. and P. Marciniuk, det. B. Trávníček 2005 (cf.), conf. H. Øllgaard 2006.
- Górecko Stare 50°32'56,2"; 22°56'12,3", **GF0048**, roadside, 13.05.2003, leg. J. and P. Marciniuk, det. H. Øllgaard 2006 (?).

Taraxacum cordatum Palmgr.

- Zwierzyniec, 50°35'35,9"; 22°58'21,1", **GE9191**, the Echo Ponds, near parking place, 13.05.2003, leg. J. and P. Marciniuk, det. B. Trávníček 2005.

Taraxacum crassum H. Øllg. et Trávníček

- The Field Education Station of the Roztoczański National Park, 50°35'23,4"; 22°59'41", **GE9155**, mountainside wasteland, 13.05.2003, leg. J. and P. Marciniuk, det. B. Trávníček 2005.

Taraxacum diastematicum Markl.

- Szczebrzeszyn, 50°41'05,9"; 22°59'08,4", **GE8181**, *Calthion* wet meadow in the Wieprz River valley, 13.05.2003, leg. J. and P. Marciniuk, det. B. Trávniček 2005.

- Zwierzyniec, 50°36'37,4"; 22°57'24,6", **GE9170**, meadow, 13.05.2003, leg. J. and P. Marciniuk, det. B. Trávniček 2005 (cf.).

Taraxacum ekmanii Dahlst.

- Czarnystok, 50°38'47,1"; 22°48'30,6", **FE9939**, meadow in the Goraj River valley, 13.05.2003, leg. J. and P. Marciniuk, det. B. Trávniček 2005.

- Zwierzyniec, 50°36'37,4"; 22°57'24,6", **GE9170**, meadow, 13.05.2003, leg. J. and P. Marciniuk, det. B. Trávniček 2005.

- Obrocz, 50°36'10,5"; 23°01'21,9", **GE9174**, low marshland at the Wieprz River bank, 13.05.2003, leg. J. and P. Marciniuk, det. B. Trávniček 2005 (cf.), conf. H. Øllgaard 2006.

- Szczebrzeszyn, 50°41'05,9"; 22°59'08,4", **GE8181**, *Calthion* wet meadow in the Wieprz River valley, 13.05.2003, leg. J. and P. Marciniuk, det. B. Trávniček 2005.

Zwierzyniec – Górecko roadside, 50°35'43"; 22°58'25,8", **GE9181**, meadow near the Echo Ponds, 13.05.2003, leg. J. and P. Marciniuk, det. B. Trávniček 2005 (cf.), conf. H. Øllgaard 2006.

- Lipowiec, 50°37'04,4"; 22°51'27,5", **GE9062**, meadow in the Goraj River valley, 13.05.2003, leg. J. and P. Marciniuk, det. B. Trávniček 2005 (cf.), conf. H. Øllgaard 2006.

Taraxacum glossodon Sonck & H. Øllg.

- Obrocz, 50°36'10,5"; 23°01'21,9", **GE9174**, meadows and marshlands at the Wieprz River bank, 13.05.2003, leg. J. and P. Marciniuk, det. H. Øllgaard 2006 (veris.).

Taraxacum glowackii H. Øllg.

- Zwierzyniec, 50°36'37,4"; 22°57'24,6", **GE9170**, meadow, 13.05.2003, leg. J. and P. Marciniuk, det. H. Øllgaard 2006 (?).

- Żurawnica, 50°33'15,6"; 22°57'52,2", **GF0130**, wastelands at the Wieprz River bank, 13.05.2003, leg. J. and P. Marciniuk, det. H. Øllgaard 2006.

Between Panasówka and Zwierzyniec, 50°36'23,6"; 22°54'10,7", **GE9086**, forest border – the Roztoczański National Park, 13.05.2003, leg. J. and P. Marciniuk, det. H. Øllgaard 2006.

Taraxacum haematicum Hagl. ex H. Øllg. & Wittzell

- Czarnystok, 50°38'47,1"; 22°48'30,6", **FE9939**, meadow in the Goraj River valley, 13.05.2003, leg. J. and P. Marciniuk, det. T. Gruzewska, conf. H. Øllgaard 2006 (?).

Taraxacum hemicyclum Hagl.

• Szczebrzeszyn, 50°41'05,9"; 22°59'08,4", **GE8181**, *Calthion* wet meadow in the Wieprz River valley, 13.05.2003, leg. J. and P. Marciniuk, det. H. Øllgaard 2006.

Taraxacum hepaticum Railons.

Between Panasówka and Zwierzyniec, 50°36'23,6"; 22°54'10,7", **GE9086**, forest border at the boundary of the Roztoczański National Park, 13.05.2003, leg. J. and P. Marciniuk, det. B. Trávniček 2005 (cf.), conf. H. Øllgaard 2006.

Taraxacum interveniens Hagl.

• Szozdy, 50°34'37,2"; 22°56'06,4", **GF0018**, meadow near railway, 13.05.2003, leg. J. and P. Marciniuk, det. B. Trávniček 2005 (cf.), conf. H. Øllgaard 2006.

Taraxacum lacinulatum Markl.

• Tereszpól Kukiełki, 50°32'56,3"; 22°56'12,5", **GF0048**, humid pasture, 13.05.2003, leg. J. and P. Marciniuk, det. B. Trávniček 2005 (cf.).

Taraxacum lucidum Dahlst.

• Szczebrzeszyn, 50°41'05,9"; 22°59'08,4", **GE8181**, *Calthion* wet meadow in the Wieprz River valley, 13.05.2003, leg. J. and P. Marciniuk, det. H. Øllgaard 2006.

Taraxacum ochrochlorum Hagl.

• Czarnystok, 50°38'47,1"; 22°48'30,6", **FE9939**, meadow in the Goraj River valley, 13.05.2003, leg. J. and P. Marciniuk, det. B. Trávniček 2005.

• The Field Education Station of the Roztoczański National Park, 50°35'23,4"; 22°59'41", **GE9155**, mountainside wasteland, 13.05.2003, leg. J. and P. Marciniuk, det. B. Trávniček 2005 (cf.).

Zwierzyniec – Górecko roadside, 50°35'43"; 22°58'25,8", **GE9192**, meadow near the Echo Ponds, 13.05.2003, leg. J. and P. Marciniuk, det. B. Trávniček 2005 (cf.), conf. H. Øllgaard 2006.

Taraxacum oinopolepis Dahlst.

• Biłgoraj, 50°33'11"; 22°41'30", **FF0941**, meadow, 13.05.2003, leg. J. and P. Marciniuk, det. H. Øllgaard 2006 (?).

Taraxacum planum Raunk. emend. H. Øllg. s.l.

• Panasówka, 50°36'0,5"; 22°52'31,9", **GE9084**, meadows and marshlands at the Gorajec River bank, 13.05.2003, leg. J. and P. Marciniuk, det. H. Øllgaard 2006 (?).

Taraxacum pulchrifolium Markl.

• Szczebrzeszyn, 50°41'05,9"; 22°59'08,4", **GE8181**, *Calthion* wet meadow in the Wieprz River valley, 13.05.2003, leg. J. and P. Marciniuk, det. B. Trávniček 2005.

Taraxacum semiglobosum H. Lindb.

Between Panasówka and Zwierzyniec, 50°36'23,6"; 22°54'10,7", **GE9086**, forest border at the boundary of the Roztoczański National Park, 13.05.2003, leg. J. and P. Marciniuk, det. Z. Głowacki, conf. H. Øllgaard 2006.

Taraxacum sinuatum Dahlst.

• Lipowiec, 50°37'04,4"; 22°51'27,5", **GE9062**, meadow in the Goraj River valley, 13.05.2003, leg. J. and P. Marciniuk, det. B. Trávniček 2005 (cf.), conf. H. Øllgaard 2006.

Taraxacum stenoglossum Brenner (syn.: *T. dahlstedtii* H. Lindb.).

• Panasówka, 50°36'0,5"; 22°52'31,9", **GE9084**, meadows and marshlands at the Gorajec River bank, 13.05.2003, leg. J. and P. Marciniuk, det. H. Øllgaard 2006.

Taraxacum subhellersianum M.P.Christ.

• Żurawnica, 50°33'15,6"; 22°57'52,2", **GF0130**, wasteland at the Wieprz River bank, 13.05.2003, leg. J. and P. Marciniuk, det. B. Trávniček 2005 (cf.).

Taraxacum tanyphyllum Dahlstedt, Bot. Soc. Exch. Club Brit. Isles 9: 565. 1932.

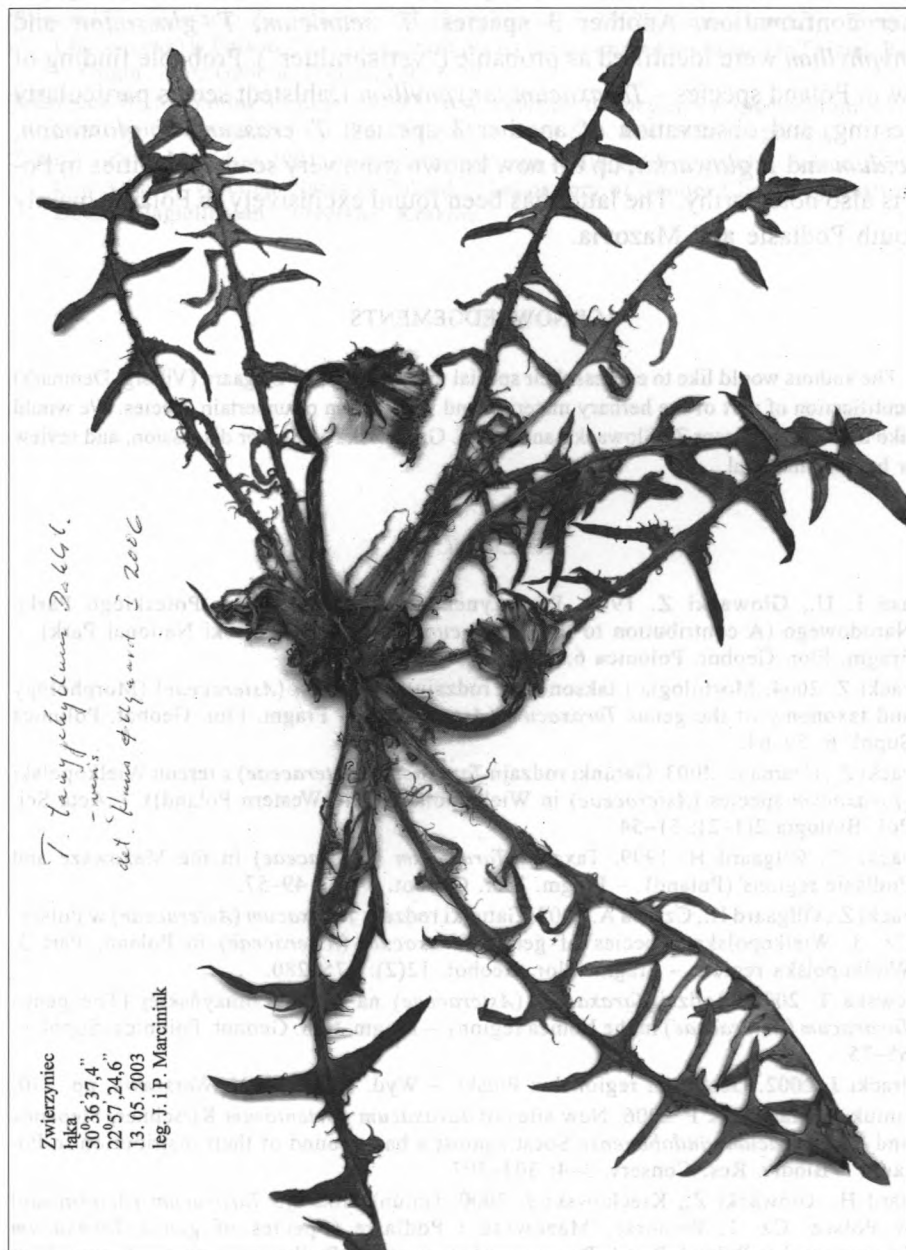
• Zwierzyniec, 50°36'37,4"; 22°57'24,6", **GE9079**, meadow, 13.05.2003, leg. J. and P. Marciniuk, det. H. Øllgaard 2006 (veris.).

Taraxacum tanyphyllum is probably a new species in Poland. The specimen collected at the locality in Zwierzyniec was identified as *Taraxacum tanyphyllum*, according to H. Øllgaard, with high probability ("verisimiliter"). This species resembles *T. diastematicum*, which was also found in the region under study.

Main diagnostic features of *T. tanyphyllum* include: most often tall plant; leaves long, almost glabrous; terminal lobe hastate to almost sagittate, usually larger than a pair of lateral lobes below it; lateral lobes 4–6, regular, usually undivided, patent, narrow, acute to subacute, ± parallel-sided; interlobes often narrow, rather long, mostly without large teeth; petioles long, narrowly winged, on outer leaves often pallid, on middle and inner leaves reddish; midrib usually ± reddish, with small striations; outer bracts recurved, ca 4 mm wide, pale (greyish) green on upper surface, with narrow whitish border; styles discoloured, pollen present.

CONCLUSIONS

The present paper is a first report on species diversity, and distribution of small *Taraxacum* species in the Central and Western Roztocze, and in adjacent areas. The localities of 23 species belonging to 2 sections: *Erythrosperma* – 1 species and *Ruderalia* – 22 species were found. Identification of 5 of them –

Fig. 2. *Taraxacum tanyphyllum* Dahlstedt

Taraxacum subhelfersianum, *T. planum*, *T. oinopolepis*, *T. lacinulatum* and *T. haematicum* – are doubtful, and their presence in the area under study requires further confirmation. Another 3 species: *T. scanicum*, *T. glossodon* and *T. tanyphyllum* were identified as probable (“verisimiliter”). Probable finding of a new in Poland species – *Taraxacum tanyphyllum* Dahlstedt seems particularly interesting, and observation of another 3 species: *T. crassum*, *T. glossodon*, *T. lucidum* and *T. głowackii*, up till now known from very scarce localities in Poland is also noteworthy. The latter has been found exclusively in Poland, mainly in South Podlasie and Mazovia.

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