

ANETA CZARNA

## ALBINOTIC FLOWERS IN PLANTS WILDLY GROWING ON THE AREA OF THE WIELKOPOLSKA LOWLAND

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**ABSTRACT.** This work presents a list of 64 wild plant species whose white-flowered specimens were found in the central part of the Wielkopolska Lowland, although their flowers are normally blue, violet, pink or yellow.

**Key words:** Wielkopolska, albino plants, vascular flora, ATPOL

### Introduction

Albinism (from Latin *albus* = *white*) occurs not only in the world of fauna but also in that of flora. It is demonstrated by the occurrence of completely white flowers in plants whose usual flowers have other colours. Generally, albinism is explained by the absence of some genetic factors, and abiotic forms are regarded as separate genotypes and their dissimilarity has a mutational character. It is also believed that possibly the lack of some nutritive components in the soil can contribute to the appearance of white flowers. It is probable not, some microelements are missing causing the disappearance of anthocyanic dyes in flowers (Stecki 1962).

“Albino” do not include plants which regularly have white flowers like e.g. *Convallaria majalis*, *Galanthus nivalis*, *Viburnum opulus* and others. Albino from the area of the Tatra mountains were studied by Chmiel (1983) and by Stecki (1962) who found them in *Fritillaria meleagris*.

### List of “albino flora”

In the Wielkopolska Lowland (Fig. 1), it has been observed that among wildly growing plants with blue, violet, pink or yellow flowers, there appear specimens with white flowers and that is why they have been called ‘albino’.

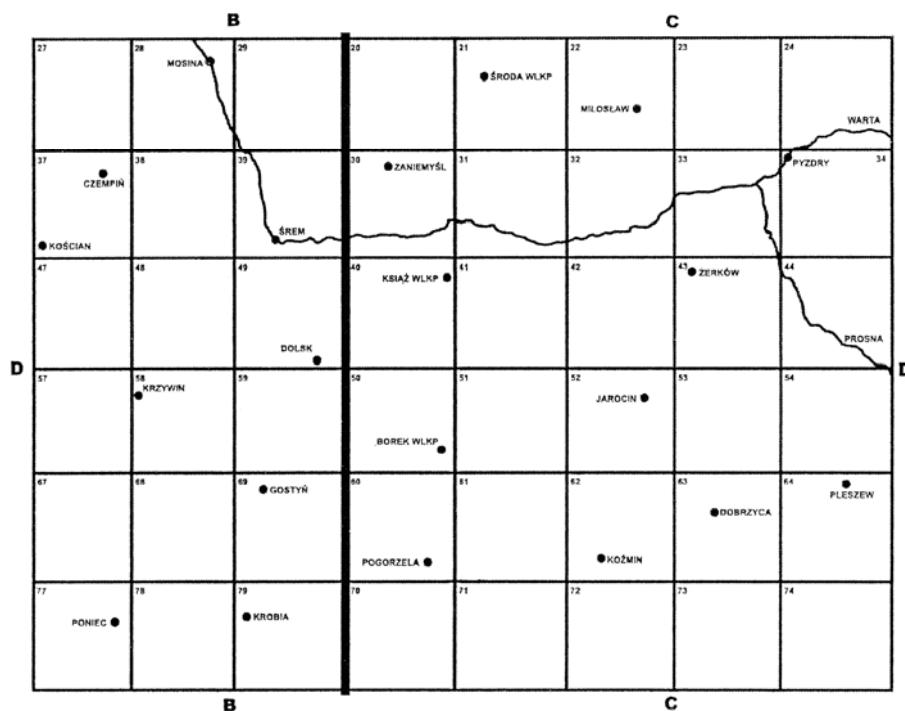


Fig. 1. Location of the study area on the ATPOL grid  
Ryc. 1. Lokalizacja badanego obszaru w siatce ATPOL

Below, there is a list of ‘albino’ localities recorded during field studies. Each item contains the species name, the author of the given species and a letter indicating colour abbreviation of their regular flowers: V – violet, B – blue, P – pink and Y – yellow.

1. *Ajuga reptans* L. (V)
  - “Taczanowski Forest” from Taczanów side, commune Pleszew [CD64] in a deciduous forest.
2. *Anchusa officinalis* L. (P)
  - Brzostków, commune Żerków [CD33] – a roadside slope.
3. *Ballota nigra* L. (P)
  - Ługi, commune Książ Wlkp. [CD40] – in a roadside ditch opposite a farmstead,
  - Zawory, commune Książ Wlkp. [CD40] – at a roadside in N part of the village.
4. *Calluna vulgaris* (L.) Hull (P)
  - Ciemierów, commune Pyzdry [CD34] – in a pine wood.
5. *Campanula glomerata* L. (B)
  - Miąskowo, commune Krzynosy [CD31] – in a birch forest at meadows, about 2 km to SE from the village.

6. *Campanula patula* L. (B) (Phot. 1)
  - Białobrzegi, commune Pyzdry [CD24] – a meadow,
  - Ligota, commune Raszków [CD73] – in an oakwood to the S of the village,
  - Lipówka, commune Dolsk [CD50] – a dry meadow at the Obra canal,
  - Taczanów, commune Pleszew [CD64] – a grassy roadside at the road from PKP railway station to the forester's lodge.
7. *Carduus crispus* L. (P)
  - Murzynowo Leśne, commune Krzykosy [CD31] – in the river valley alder forest to S from the village,
  - Czarne Piątkowo, commune Środa Wlkp. [CD22] – in a ditch at a forest to the S from the village.
8. *Centaurea cyanus* L. (B) (Phot. 2)
  - Chrzastowo, commune Książ Wlkp. [CD40] – in a tomato culture to the N from the village,
  - Klęka, commune Nowe Miasto at Warta [CD42] – in a rye culture,
  - Ligota Odbudowanie, commune Raszków [CD73] – in a rye culture,
  - Studzianna, commune Borek Wlkp. [CD50] – in a rye culture.
9. *Centaurea jacea* L. (P)
  - Taczanów, commune Pleszew [CD64] – in a roadside ditch.
10. *Centaurea scabiosa* L. (P)
  - Pleszew, commune Pleszew [CD64] – numerous in a roadside ditch at a highway to Kalisz,
  - Śrem, commune Śrem [BD39] – in a roadside ditch near a bakery at a highway from Książ,
  - Wieszczyżyn, commune Śrem [BD49] – a slope at a railway track.
11. *Centaurea stoebe* L. (P)
  - Zakrzewice, commune Książ Wlkp. [CD31] – on a sandy roadside at a highway from Książ.
12. *Cichorium inthybus* L. (B)
  - Komorze Przybysławskie, commune Żerków [CD33] – a field roadside to the N of a former manor park in the direction of a former PGR building,
  - Pysząca, commune Śrem [BD49] – on the railway track at a PKP bus stop,
  - Witowo, commune Krzykosy [CD32] – at a roadside.
13. *Coronilla varia* L. (P)
  - Śrem, commune Śrem [BD39] – a roadside slope on the Jeziorany Settlement.
14. *Cosmos bipinnatus* Cav. (P)
  - Wieszczyżyn, commune Śrem [BD49] – at a cottage,
  - Witowo, commune Krzykosy [CD32] – at a roadside opposite to a homestead garden.

15. *Dactylorhiza fuchsii* (Druce) Soó (P)
  - “Taczanowski Forest” from the side of Bronowo, commune Pleszew [CD74] – in a deciduous forest together with *Botrychium matricariifolium*.
16. *Dactylorhiza maculata* (L.) Soó (P)
  - “Pyzdrska Meadow”, commune Pyzdry [CD24] – on a meadow together with *Orchis palustris*.
17. *Dianthus deltoides* L. (P)
  - Miranowo, commune Dolsk [BD49] – a meadow to the NW from a forester’s lodge,
  - Orzechowo, commune Miłosław [CD32] – on a flood bank at the Warta river.
18. *Dianthus superbus* L. (P)
  - Tesiny, commune Zaniemyśl [CD30] – a meadow.
19. *Digitalis purpurea* L. (P)
  - “Taczanowski Forest” from the side of Taczanów, commune Pleszew [CD64] – a moist, shadowy mixed forest with a field-like occurrence of *Molinia coerulea*.
20. *Echium vulgare* L. (B)
  - Chlebowo, commune Mirosław [CD33] – at the skirts of pine wood to the E from the village,
  - Zakrzewo, commune Książ Wlkp. [CD40] – on a meadow.
21. *Epilobium palustre* L. (P)
  - Jarosławki, commune Książ Wlkp. [CD40] – a meadow to N from village,
  - Miranowo, commune Dolsk [BD49] – a glacier pond at a forester’s lodge.
22. *Erodium cicutarium* (L.) L’Hér. (P)
  - Góra, commune Jaraczewo [CD51] – a railway subgrade,
  - Mosina, commune Mosina [BD28] – on a lawn.
23. *Eupatorium cannabinum* L. (P)
  - Zapowiednia, commune Pyzdry [CD34] – in a roadside ditch at a highway from Zagórowo.
24. *Geranium molle* L. (P)
  - Czerwona Wieś, commune Krzywiń [BD57] – a forest roadside.
25. *Geranium palustre* L. (P)
  - “Czeszewskie Forests” from the side of Miłosław, commune Miłosław [CD22] – a forest roadside,
  - Włoskiejewki, commune Książ Wlkp. [CD40] – on the bank of a fish pond.
26. *Geranium pratense* L. (B) (Phot. 3)
  - Boguszyn, commune Nowe Miasto at Warta [CD41] – a roadside at a highway from Jarocin,

- Brzóstownia, commune Książ Wlkp. [CD40] – a roadside at a highway to Włosciejewki,
  - Dobrzyca, commune Dobrzyca [CD63] – mass appearance in a roadside ditch in the direction of Koźminiec,
  - Jerka, commune Krzywiń [BD48] – in a roadside ditch at a highway to Kościan,
  - Kielczyn, commune Książ Wlkp. [CD40] – at a highway to Śrem,
  - Książ Wlkp., commune Książ Wlkp. [CD40] – in a roadside ditch at a highway to Śrem,
  - Książ Wlkp., commune Książ Wlkp. [CD40] – in a roadside ditch at a highway to Jarocin,
  - Konarzyce, commune Książ Wlkp. [CD40] – in a roadside ditch at a highway Śrem-Nowe Miasto,
  - Lubiń, commune Krzywiń [BD58] – in a roadside ditch opposite to a cloister,
  - Włosciejewki, commune Książ Wlkp. [CD40] – a roadside at a highway from Brzóstownia.
27. *Geranium robertianum* L. (P)  
– Gogolewo, commune Książ Wlkp. [CD31] – in a deciduous forest.
28. *Glechoma hederacea* L. (V)  
– Pogorzela, commune Pogorzela [CD60] – at a fence.
29. *Impatiens parviflora* DC. (Y)  
– Książ Wlkp., commune Książ Wlkp. [CD40] – in a homestead garden,  
– Liż, commune Borek Wlkp. [CD50] – at forest skirts together with *Omphalodes scorpioides*.
30. *Knautia arvensis* (L.) J.M. Coult. (P)  
– Ciążęń, commune Łądek [CD24] – in a roadside ditch,  
– Zbrudzewo, commune Śrem [BD39] – a grassy roadside at a highway to Śrem.
31. *Lamium maculatum* L. (P)  
– Wola Książęca, commune Kotlin [CD53] – in a rural park,  
– Wola Książęca, commune Kotlin [CD53] – a deciduous grove to the W from village.
32. *Lamium purpureum* L. (P) (Phot. 4)  
– Czerwona Wieś, commune Krzywiń [BD57] – a forest roadside,  
– Mchy, commune Książ Wlkp. [CD40] – a grassy roadside at a highway from Niedźwiady.
33. *Lathyrus palustris* L. (P)  
– “Pyzdrska Meadow”, commune Pyzdry [CD24] – on a meadow together with *Orchis palustris*.
34. *Lavatera trimestris* L. (P)  
– Książ Wlkp., commune Książ Wlkp. [CD40] – on a dumping ground at Zakrzewska street,  
– Nowe Miasto at Warta, commune Nowe Miasto at Warta [CD32] – on a dumping ground in N part of the town.

35. *Leontodon taraxacoides* (Vill.) Mérat (Y)  
– Sroczewo, commune Książ Wlkp. [CD30] – a grassy turf at the Warta river,  
– Zaborowo, commune Książ Wlkp. [CD30] – on a flood bank at the Warta river.
36. *Linaria vulgaris* Mill. (Y)  
– Konarskie, commune Książ Wlkp. [CD40] – a dry waste land near a former PGR,  
– Książ Wlkp., commune Książ Wlkp. [CD40] – on a railway subgrade of a PKP station.
37. *Lunaria annua* L. (P)  
– Komorze Przybysławskie, commune Żerków [CD33] – near a homestead fence opposite a former manor park.
38. *Lychnis flos-cuculi* L. (P)  
– “Pyzdrska Meadow”, commune Pyzdry [CD24] – on a meadow with *Orchis palustris*.
39. *Malva neglecta* Wallr. (P)  
– Chrzastowo, commune Książ Wlkp. [CD40] – at a cottage,  
– Orzechowo, commune Miłosław [CD32] – at a fence,  
– Pyzdry, commune Pyzdry [CD34] – at a fence.
40. *Medicago sativa* L. (B)  
– Brzóstownia, commune Książ Wlkp. [CD40] – at a roadside,  
– Manieczki, commune Brodnica [BD38] – on a railway subgrade,  
– Szoldry, commune Brodnica [BD38] – on a railway subgrade,  
– Trąbinek, commune Dolsk [BD49] – a roadside at a highway to Dolsk.
41. *Mentha aquatica* L. (P)  
– Hermanów, commune Nowe Miasto at Warta [CD32] – in a ditch on a meadow,  
– Nowe Miasto at Warta, commune Nowe Miasto at Warta [CD32] – at a glacier pond at the Warta river.
42. *Myosotis arvensis* (L.) Hill (B)  
– Rogusko, commune Nowe Miasto at Warta [CD31] – in a winter rye culture.
43. *Myosotis sylvestris* Ehrh. ex Hoffm. (B)  
– Książ Wlkp., commune Książ Wlkp. [CD40] – at a fence in Łąkowa street,  
– Włociejewki, commune Książ Wlkp. [CD40] – in a thicket at a Catholic cemetery.
44. *Nigella damascena* L. (B)  
– Książ Wlkp., commune Książ Wlkp. [CD40] – on a dumping ground at Zakrzewska street.
45. *Polygonum lapathifolium* L. subsp. *lapathifolium* (P)  
– Czarny Sad, commune Koźmin [CD72] – on a ditch edge at a railway embankment,  
– Gogolewo, commune Książ Wlkp. [CD311] – on a sandy bank of the Warta river,

- Krotoszyn, commune Krotoszyn [CD72] – on a pond bank in W part of the town,
- Miłosław, commune Miłosław [CD22] – on the bottom of a fish pond in W part of the town,
- Posadowo, commune Krobia [BD68] – a waste land with a ditch,
- Sroczewo, commune Książ Wlkp. [CD30] – a sandy bank of the Warta river,
- Zaborowo, commune Książ Wlkp. [CD30] – a high sandy bank of the Warta river.

46. *Polygonum persicaria* L. (P)

- Borzykowo, commune Kołaczkowo [CD23] – on a forest roadside,
- Brzóstownia, commune Książ Wlkp. [CD40] – a field waste land at a highway to Mchy,
- Chwałęcín, commune Nowe Miasto at Warta [CD40] – in a ditch on a meadow,
- Golina, commune Jarocin [CD52] – at a cottage in a rural park,
- Konarskie, commune Książ Wlkp. [CD40] – on a meadow at a highway from Książ,
- Konarskie, commune Książ Wlkp. [CD40] – in a roadside ditch at a highway to Książ,
- Książ Wlkp., commune Książ Wlkp. [CD40] – in a potato culture,
- Książ Wlkp., commune Książ Wlkp. [CD40] – on a meadow “At a Stream” in NE part of town,
- Nowy Świat, commune Dobrzyca [CD63] – on a road in a deciduous forest to S from the village,
- Raduszkowo, commune Książ Wlkp. [CD41] – in a lucerne culture to W from the village,
- Świączyń, commune Książ Wlkp. [CD31] – in a ditch water course flowing to the Warta river,
- Włóściejewki, commune Książ Wlkp. [CD40] – in a rye culture,
- Zaborowo, commune Książ Wlkp. [CD30] – in a rye culture.

47. *Potentilla collina* Wiebel (Y)

- Sroczewo, commune Książ Wlkp. [CD30] – on a flood embankment at the Warta river.

48. *Raphanus raphanistrum* L. (Y)

- Gogolewko, commune Książ Wlkp. [CD30] – a stubble field at the Warta river,
- Wieszczyczyn, commune Dolsk [BD49] – on a stubble field after wheat.

49. *Silybum marianum* (L.) Gaertn. (P)

- Klęka, commune Nowe Miasto at Warta [CD32] – in a rape culture,
- Nowe Miasto at Warta, commune Nowe Miasto at Warta – in a wheat culture.

50. *Stachys palustris* L. (P)

- Pokrzywnica, commune Dolsk [CD50] – in a ditch at a forest to the S from the village.

51. *Symphytum officinale* L. (V)

- Białe Piątkowo, commune Miłosław [CD22] – on the bank of a fish pond,
- Dalewo, commune Śrem [BD48] – a ditch in SW end of the Mórka Lake,

- Gogolewo, commune Książ Wlkp. [CD31] – glacier pond at the Warta river,
  - Jezioro Dolskie Duże, commune Dolsk [BD49] – at the edge of a peat bog at N bank of the lake,
  - Jarosławki, commune Książ Wlkp. [CD40] – a meadow E from the lake in the direction of the village,
  - Koryta, commune Raszków [CD73] – in a ditch,
  - Książ Wlkp., commune Książ Wlkp. [CD40] – at a ditch on meadows to the S from Łąkowa street,
  - Łęg, commune Śrem [BD39] – bank of the Warta river,
  - Majdany, commune Zaniemyśl [CD30] – in a ditch on a meadow,
  - Manieczki, commune Brodnica [BD38] – on a meadow,
  - Marszew, commune Pleszew [CD54] – in a roadside ditch,
  - Mikoszyki, commune Kościan [BD37] – on a meadow,
  - Murzynówko, commune Krzykosy [CD31] – at the skirt of a river valley forest at a highway to Środa,
  - Nowe Miasto at Warta, commune Nowe Miasto at Warta [CD32] – at glacier pond at the Warta river,
  - Sroczewo, commune Książ Wlkp. [CD30] – at the bank of the Warta river,
  - Śrem, commune Śrem [BD39] – on the bank of the Warta river,
  - Zaborowo, commune Książ Wlkp. [CD30] – on the edge of the Warta river,
  - Zaniemyśl, commune Zaniemyśl [CD30] – a meadow at W bank of a lake.
52. *Thymus pulegioides* L. (P)  
– Gostyń, commune Gostyń [BD58] – on a railway siding of a PKP railway station.
53. *Tragopogon dubius* Scop. (Y)  
– Bronów, commune Pleszew [CD74] – on an intertrack space of a PKP railway station.
54. *Verbascum phlomoides* L. (Y)  
– Pyzdry, commune Pyzdry [CD34] – a highway roadside behind a bridge to the S from the town.
55. *Veronica anagallis-aquatica* L. (B)  
– Trąbinek lake, commune Dolsk [BD49] – on the S lake bank.
56. *Veronica catenata* Pennell (P)  
– Gogolewko, commune Książ Wlkp. [CD30] – on the bottom of a dried up stagnated pond at the Warta river.
57. *Veronica longifolia* L. (B)  
– Spławie, commune Kołaczkowo [CD33] – mass appearance on a meadow at the Warta river.
58. *Veronica officinalis* L. (B)  
– Włoskiejewice, commune Książ Wlkp. [CD40] – a forest roadside.
59. *Vicia cracca* L. (B)  
– Myszaków, commune Zagórów [CD34] – in a roadside ditch in W part of the village.



60. *Vicia hirsuta* (L.) S.F. Gray (B)  
– Miąskowo, commune Krzykosy [CD31] – a meadow at forest near the Miłosławka river.
61. *Vicia tetrasperma* (L.) Schreb. (V)  
– Gogolewko, commune Książ Wlkp. [CD30] – a dry waste land at the Warta river.
62. *Vicia villosa* Roth (V)  
– Książ Wlkp., commune Książ Wlkp. [CD40] – on a fence at Zakrzewska street,  
– Murzynowo Leśne, commune Krzykosy [CD32] – a grassy roadside at the highway passing through the village,  
– Pyzdry, commune Pyzdry [CD34] – a grassy roadside at the highway to Śmiełowo.
63. *Viola odorata* L. (V)  
– Borek Wlkp., commune Borek Wlkp. [CD50] – on an Evangelical cemetery,  
– Dolsk, commune Dolsk [BD49] – on a Catholic cemetery,  
– Koźmin, commune Koźmin [CD62] – on an Evangelical cemetery,  
– Koźminiec, commune Dobrzyca [CD73] – on an Evangelical cemetery,  
– Książ Wlkp., commune Książ Wlkp. [CD40] – on an Evangelical cemetery,  
– Łęg, commune Śrem [BD39] – in a rural park,  
– Maliny, commune Dolsk [CD40] – on an Evangelical cemetery,  
– Ostrowieczno, commune Dolsk [CD40] – on an Evangelical cemetery,  
– Rusko, commune Jaraczewo [CD51] – on an Evangelical cemetery,  
– Skokówko, commune Borek Wlkp. [CD51] – in a deciduous forest at Pogonie river,  
– Szypłów, commune Nowe Miasto at Warta [CD42] – in a former park,  
– Włoskiejewki, commune Książ Wlkp. [CD40] – in a former manor park.
64. *Viola reichenbachiana* Jord. ex Boreau (V)  
– Skokówko, commune Borek Wlkp. [CD51] – a deciduous forest at the Pogonie river.

## Recapitulation

On the area of the central part of the Wielkopolska Lowland, a spontaneous occurrence of 64 “albino” species was found.

Some of the mentioned “albinotic” taxa may represent a valuable and original decorative material.

Most albino plants were recorded in the following ATPOL squares: CD30, CD32, CD40 and BD49 (Fig. 2).

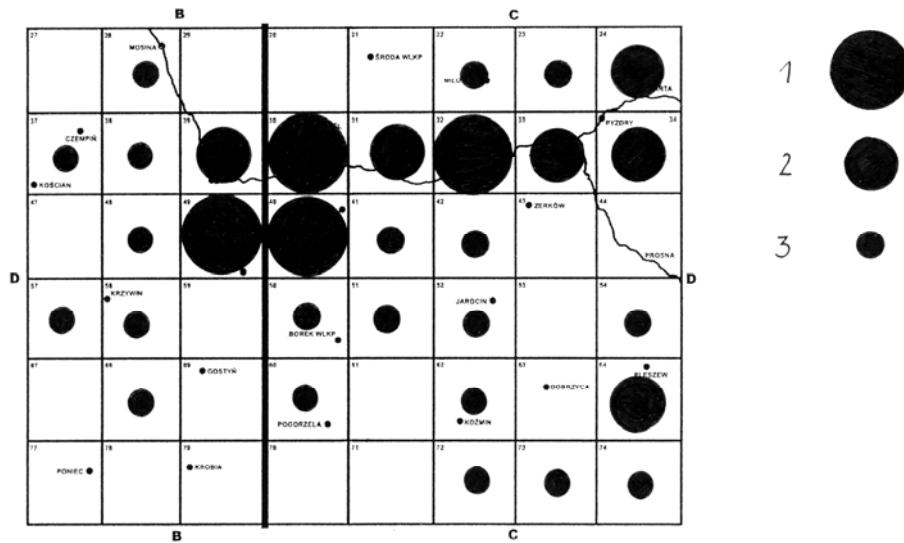


Fig. 2. Participation of albino plants in the particular ATPOL squares  
 Ryc. 2. Udział albinosów w poszczególnych kwadratach ATPOL  
 1 –  $\geq 10$ , 2 – 9-5, 3 –  $\leq 4$

### References

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## ALBINOTYCZNE KWIATY U ROŚLIN DZIKO ROSNĄCYCH NA OBSZARZE ŚRODKOWEJ CZĘŚCI WIELKOPOLSKI

### Streszczenie

Zwykle uważa się przejawy albinizmu za związane z brakiem lub obecnością pewnych czynników genetycznych, a formy albinotyczne za odrębne genotypy. Innym razem przyjmuje się, że brak jakiegoś składnika pokarmowego w glebie może wpłynąć na pojawienie się okazów o białych kwiatach. Może chodzi tu o brak jakichś mikroelementów powodujących zanik antocyjanowych barwników w kwiatach (Stecki 1962).

Na obszarze środkowej części Niziny Wielkopolskiej zanotowano spontaniczne występowanie 64 gatunków będących „albinosami”. Niektóre z wymienionych taksonów „albinotycznych” mogą być cennym i oryginalnym materiałem ozdobnym.

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Phot. 1. *Campanula patula*, Lipówka, com. Dolsk – dry  
waste land

Fot. 1. *Campanula patula*, Lipówka, gm. Dolsk – suchy  
nieużytek

(photo by – fot. A. Czarna)



Phot. 2. *Centaurea cyanus*, Chrząstowo, com. Książ  
Wilkp. – in rye culture

Fot. 2. *Centaurea cyanus*, Chrząstowo, gm. Książ  
Wilkp. – w uprawie żyta

(photo by – fot. A. Czarna)



Phot. 3. *Geranium pratense*, Lubiń, com. Krzywiń  
– roadside

Fot. 3. *Geranium pratense*, Lubiń, gm. Krzywiń  
– przydroże  
(photo by – fot. A. Czarna)



Phot. 4. *Lamium purpureum*, Mchy, com. Książ Wlkp.  
– roadside ditch

Fot. 4. *Lamium purpureum*, Mchy, gm. Książ Wlkp.  
– rów przydrożny  
(photo by – fot. A. Czarna)