**Genus Brephidium Scudder, 1876**

*Pygmy Blues*

_Bulletin of the Buffalo Society of Natural Sciences_ **3**: 123 (98-129).

Type-species: *Lycaena exilis* Boisduval, by original designation [extralimital].

The genus *Brephidium* belongs to the Family Lycaenidae Leach, 1815; Subfamily Polyommatinae Swainson, 1827; Tribe Polyommatini Swainson, 1827; Subtribe Brephidiina

*Brephidium (Pygmy Blues)* is a genus of five species, in three subgenera (*Brephidium, Oraidium* and *Afroidium*). (Zhang et al. 2024. Taxonomic advances driven by the genomic analysis of butterflies. _The taxonomic report of the international Lepidoptera survey_ **11** (7): 24–25).

Three species are Afrotropical; the other two are extralimital.

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**Subgenus Brephidium Scudder, 1876**

*Pygmy Blues*

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**Brephidium (Brephidium) exilis** (Boisduval, 1852)

*Western Pygmy Blue*


**Type locality**: United States of America: “Califonrnie”.

**Distribution**: Largely extralimital (North America). *Brephidium exilis exilis* (Boisduval, 1852) was first recorded from Sharjah, United Arab Emirates (UAE) by Rutjan and Jongbloed in December 1995 (Larsen 2001).

**Specific localities**:
- **Oman** – [Al] Buraimi (Pittaway et al. 2006); Mahda (Pittaway et al. 2006); Muscat, Qurm (Vis, 2010); Sohar (Otto, 2014).
- **United Arab Emirates** – Sharjah (Larsen, 2001); Marawha Island, near Abu Dhabi (Gillet, 2002); Ajman (Feulner, 2003); Al-Ain (Feulner, 2003); Dubai (Feulner, 2003); Das Island (Feulner, 2003); Fujairah (Feulner, 2003).
- **Saudi Arabia** – Dhhahran (Pittaway et al. 2006); Al Qatif (Pittaway _et al._ 2006).
- **Habitat**:

**Habits**: Male and female behaviour was recorded in Oman by Otto (2014).

**Flight period**:

**Early stages**:

**Larval food**:
- _Artiplex_ sp. (Amaranthaceae) [Pittaway _et al._, 2006].
- _Salsola_ sp. (Chenopodiaceae) [Pittaway _et al._, 2006].
- _Sesuvium_ sp. (Aizoaceae) [Pittaway _et al._, 2006].
- _Trianthema_ sp. (Aizoaceae) [Pittaway _et al._, 2006].
- _Zaleya pentandra_ (L.) C. Jeffrey (Aizoaceae) [Sohar, Oman; Otto, 2014: 97].

**Relevant literature**:
- Otto, 2014 [New locality and host plant].
- Vis, 2010 [Range expansion in Oman].
- Pittaway _et al._, 2006 [Establishment in Arabian Gulf].
- Feulner, 2003 [Status in United Arab Emirates].
- Gillett, 2002 [Recorded from Abu Dhabi].
Subgenus *Oraidium* Bethune-Baker, 1914

*Brephidium (Oraidium) barberae* (Trimen, 1868)

Dwarf Blue

*Dwarf Blue (Oraidium barberae)* male upper- and underside.

Images courtesy Steve Woodhall.


**Lycaena barberae** Trimen, 1868. Trimen & Bowker, 1887b.


**Oraidium barberae** Trimen. Swanepoel, 1953a.


**Brephidium (Oraidium) barberae** (Trimen, 1868) *comb. nov.* Grishin, 2024.

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**Oraidium barberae.** Male (Wingspan 13 mm). Left – upsinside; right – underside.


Images M.C. Williams ex Williams Collection.

**Oraidium barberae.** Female (Wingspan 15 mm). Left – upsinside; right – underside.

Loding, Mpumalanga, South Africa. 17 October 2010. J. Dobson.

Images M.C. Williams ex Dobson Collection.

**Type locality:** [South Africa]: “Highlands, near Grahamstown; Tsomo River; Burghersdorp; Murraysburg”.

**Diagnosis:** Similar to *Brephidium metophis*, from which it differs in the following features: darker on the
distribution: Zimbabwe, Botswana, South Africa (Limpopo Province, Mpumalanga, Gauteng, Free State Province, KwaZulu-Natal, Eastern Cape Province, Western Cape Province, Northern Cape Province), Swaziland (Duke et al., 1999), Lesotho. In South Africa its distribution covers 176 quarter degree squares (528 records) [see http://vmus.adu.org.za]. It is regarded as very widespread.

specific localities:
Limpopo Province – Warmbaths (Swanepoel, 1953); Polokwane (Swanepoel, 1953); Legalies (Swanepoel, 1953); Highlands Wilderness (Bode & Bode, unpublished checklist).
Gauteng – Pretoria (Swanepoel, 1953).
Free State Province – Bloemfontein (Swanepoel, 1953); Ladybrand (Swanepoel, 1953).
KwaZulu-Natal – Umkomaas (Swanepoel, 1953); Estcourt (Swanepoel, 1953).
Eastern Cape Province – Highlands west of Grahamstown (TL; Barber and Atherstone), Tsomo River (Trimen, 1868); Burgersdorp (Trimen, 1868); between Port Elizabeth and Uitenhage (Swanepoel, 1953); Willowmore (Swanepoel, 1953); Zuurburg (Swanepoel, 1953); Steynsburg (Swanepoel, 1953).
Western Cape Province – Murraysburg (Trimen, 1869); St. Helena Bay (Swanepoel, 1953); Breede River (Swanepoel, 1953); Robertson (Swanepoel, 1953); Calitzdorp (Swanepoel, 1953); Bonnievale (Swanepoel, 1953); Matjesfontein (Swanepoel, 1953); Hanover Road (Swanepoel, 1953); Montagu (Swanepoel, 1953); Beaufort West (Swanepoel, 1953); Bitterfontein (Swanepoel, 1953); Nuwerus (Pringle et al., 1994); near Mossel Bay (Pringle et al., 1994); Yzerfontein (Pringle et al., 1994); Die Kelders (Pringle et al., 1994).
Lesotho – Maseru (Swanepoel, 1953).

Habitat: Often found in areas with short grass and sandy patches (Pringle et al., 1994).

Habits: Males establish and defend small territories (Pringle et al., 1994).

Flight period: All of the warmer months (Pringle et al., 1994).

Early stages: Cockburn.

2013: 12-14.

Eggs and 1st and 2nd instar larvae were not found. Feeding by the third instar larva took place on both leaves and flower parts of the food plant. The larva was 8.5mm in length, overall greenish-yellow in colour, with the dorsal humps and lateral extremities of each segment washed with dark pink, matching the colour of the larval host plant very closely. The larva was covered in short bristles, with a dark head, mostly invisible, being concealed under the front segments as is typical of many lycaenid larvae. The stems of the food plant are, in places, finely speckled and the margins of the fleshy, slightly speckled leaves are also washed with the same pink. The colouration described above renders the larva difficult to detect. In the final instar the larva had lost most of the pink blush. A silken girdle was spun and pupation commenced. A silken girdle was spun and pupation commenced. The pupa was smooth and, at first, translucent green, and approx. 5.5mm in length. Later the internally developing wings had darkened, followed by a steady darkening of the remainder of the pupa until emergence of an adult female O. barberae. The time elapsing from pupation to emergence was 21 days.

A second larva was discovered later, shortly after it had apparently emerged from a feeding chamber in the stem of the foodplant. The chamber was adjacent to the feeding larva and was surrounded by fresh frass. This perhaps suggests that the early instars of this insect remain within, and feed on, the soft fleshy parts of its succulent host plant. This may also explain why in both cases the earlier instars remained undiscovered, despite rigorous inspection of the plant specimens. The feeding manner of the larva is also of interest as it appears to avoid the epidermal material and prefers the internal leaf and stem tissue.
Egg, final instar larva and pupa of *Oraidiom barberae*. Images courtesy Allison Sharp.

**Larval food:**
*Crassula expansa* ssp. *fragilis* (Crassulaceae) [Cockburn, 2013; Mholopeni Nature Reserve, KwaZulu-Natal, South Africa].
*Crassula muscosa* L. (Crassulaceae) [Alison Sharp, unpublished, 2014].
*Exomis microphylla* (Thunb.) Aellen var. *axyrioides* (Fenzl ex Moq.) Aellen (Chenopodiaceae) [Clark & Dickson, 1971: 92; as *Exomis axyrioides*].

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**Subgenus Afroidium** Grishin, 2024

**Dwarf Blue**

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**Brephidium (Afroidium) metophis** (Wallengren, 1860)

*Tinktinkie Pygmy Blue*

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*Brephidium (Afroidium) metophis* (Wallengren, 1860) **comb. nov.** Grishin, 2024.

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*Brephidium (Afroidium) metophis*. Male. Left – upperside; right – underside.
40 km north of Riversdale, Western Cape Province, South Africa. 9 January 1997. J. Greyling.
Images M.C. Williams ex Greyling Collection.

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*Brephidium (Afroidium) metophis*. Female (Wingspan 19 mm). Left – upperside; right – underside.
Images M.C. Williams ex Williams Collection.

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**Type locality**: [Namibia]: “Ad Kuisip Africae”.
Holotype in the Swedish Natural History Museum (images available at www2.nrm.se/en/lep_nrm/m).
**Distribution**: Angola, Mozambique, Zimbabwe, Botswana, Namibia, South Africa (Free State Province – west, KwaZulu-Natal, Eastern Cape Province, Western Cape Province, Northern Cape Province).
In South Africa its distribution covers 133 quarter degree squares (409 records) [see http://vmus.adu.org.za]. It is regarded as widespread.

**Specific localities:**
- Angola – Lake Arco, Namibe [15 44 21S 12 08 06E] (Willis, 2009).
- Mozambique – Maputo (Pringle et al., 1994).
- Botswana – Kgalagadi Transfrontier Park (Van Son, 1959); Tshabong (E. Pinhey vide Larsen, 1991); Nata River (Makgadigadi) (E. Pinhey vide Larsen, 1991); Boteti River (Larsen, 1991); Makaikais (Pringle et al., 1994).
- Namibia – near Walvis Bay (TL; Wahlberg).
- Free State Province – Bloemfontein (Swanepoel, 1953); Cyferfontein [-30.3736 25.8131] (R. Griesel)
- Eastern Cape Province – Willowmore (Swanepoel, 1953); Hankey (Swanepoel, 1953); Alickedale (Swanepoel, 1953); Cradock (Swanepoel, 1953); Aberdeen (Swanepoel, 1953); Steynsburg district (Pringle et al., 1994).
- Western Cape Province – Clanwilliam (Swanepoel, 1953); Vanrhynsdorp (Swanepoel, 1953); Matjesfontein (Swanepoel, 1953); Calitzdorp (Swanepoel, 1953); Hanover Road (Swanepoel, 1953); near Mossel Bay (Clark & Dickson, 1971); to the west of Montagu (Clark & Dickson, 1972; Pringle et al., 1994); foot of the Molteno Pass near Beaufort West (Pringle et al., 1994); Little Brak near Mossel Bay (Pringle et al., 1994); near Klawer (Pringle et al., 1994); between Vanrhynsdorp and Bitterfontein (Pringle et al., 1994).
- Northern Cape Province – Garies (Swanepoel, 1953); Springbok (Swanepoel, 1953); Noupoort (Swanepoel, 1953); Kagaligadi Transfrontier Park (van Son, 1959).

**Flight period:** All of the warmer months of the year, from as early as August (Pringle et al., 1994).

**Early stages:**

Clark & Dickson, 1971: 89 [as Brephidium metophis; near Mossel Bay and near Montagu, both Western Cape Province].

"**Egg.** 0.4 mm diam. x 0.175 mm high. Laid singly on the bladder-like leaf of the food-plant, where it is very inconspicuous. White with touches of yellow when laid, the egg changes to pale green with fine white ribbing arranged in two reversed sets, of 24 each, radiating from the micropyle in involute curves.

The intersections are punctuated by very small moles. Eggs hatch after 8-10 days. The discarded shell is not eaten.

**Larva.** 1st instar 0.8 mm, growing to 1.6 mm in 4 days; 2nd instar growing to 2.25 mm in 5 days; 3rd instar growing to 3.7-4.2 mm in 8 days; 4th instar growing to 8.5 mm in 12 days. The honey-gland and tubercles are present in the 3rd and 4th instars. Larvae burrow into the bladder-like leaves, leaving a round hollowed-out hole and move to the next one. Moultng takes place where the larvae are feeding and an empty shell is left. Larvae are not easily detected owing to their size and colour. There are many broods. The final-instar tubercles have 13 finely-barbed spines. Colour does not vary. **Pupa.** 6-6.5 mm. Secured among dry leaves by chamastral hooks and a girdle. The colour is varied by the intensity of spotting. Emergence takes place after 9 days. **Parasites.** Larva parasitized by a number of small chalcids which were found on the food-plant occupied by larvae of this species, it is presumed that they may have preyed on the larvae."

**Larval food:**
- Exomis microphylla (Thunb.) Aellen var. axyioides (Fenzl ex Moq.) Aellen (Chenopodiaceae) [Clark & Dickson, 1971: 89; as Exomis axyioides].
- Salsola aphylla L. f. (Chenopodiaceae) [Marion Maclean, pers. comm., 2015; suspected host-plant].