

Genus *Pseudanaphaeis* Bernadi, 1953

Caper Whites

Revue Française d'Entomologie **20**: 50 (47-53). Type-species: *Pieris gidica* Godart, [1819], by original designation.

The genus *Pseudanaphaeis* Bernadi, 1953 belongs to the Family Pieridae Swainson, 1820; Subfamily Pierinae Swainson, 1820; Tribe Pierini Swainson, 1820; Subtribe Aporiina Chapman, 1895. The other genera in the Subtribe Aporiina in the Afrotropical Region are *Belenois*, *Dixeia* and *Mylothris*.

Pseudanaphaeis (Caper Whites) is a monotypic genus occurring both in the Afrotropical and Oriental Regions.

Pseudanaphaeis gidica (Godart, [1819])

Pointed Caper White

Pieris gidica Godart, [1819] *in* Latreille & Godart, [1819], [1824]. *Encyclopédie Méthodique*. Histoire Naturelle [Zoologie] **9** Entomologie: 131 (1-328 [1819], 329-828 [1824]). Paris.

Pieris gidica Godart. Trimen, 1862c.

Pieris gidica Godart, 1819. Trimen & Bowker, 1889.

Belenois gidica Godart. Swanepoel, 1953a.

Belenois gidica (Godart, 1819). Dickson & Kroon, 1978.

Belenois (Anaphaeis) gidica (Godart, 1819). Pringle *et al.*, 1994: 296.

Pseudanaphaeis gidica (Godart, 1819), **comb. nov.** Grishin, 2023a.



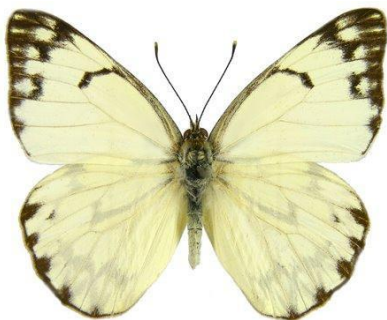
Left: Male Pointed Caper White (*Pseudanaphaeis gidica*) mudpuddling. Centre: Male resting. Right: Male dry season form.
Images courtesy Raimund Schutte (left) and Steve Woodhall (centre and right).



Yellow form and white form females of the Pointed Caper White.
Images courtesy Steve Woodhall.



Pseudanaphaeis gidica gidica. Male (Wet season form). Left – upperside; right – underside.
Zamaye, northern Cameroon. July 1993. SCC. ABRI-2019-2911.
Images M. Williams ex ABRI Collection.



Pseudanaphaeis gidica gidica. Male (Dry season form). Left – upperside; right – underside.
Adi, Ituri, DRC. 3 24N, 30 47E. 11 April 2014. T. Desloges.
Images courtesy Thomas Desloges.

Alternative common name: Brown-veined White.

Type locality: No locality given.

Distribution: Sub-Saharan Africa, including Mauritania, Senegal, Gambia, Burkina Faso, Ghana, Ivory Coast (Warren-Gash, pers. comm., 2002), Benin, Nigeria, Niger, Cameroon, Ethiopia, Somalia, Uganda, Angola, Democratic Republic of Congo, Kenya, Tanzania, Malawi, Zambia, Mozambique, Zimbabwe, Botswana, Namibia, South Africa, Swaziland.

Habitat: Frost-free savanna. In West Africa in Sudan savanna and the Sahel (Larsen, 2005a). Also in *Brachystegia* woodland (Kielland, 1990d). In Tanzania at altitudes from near sea-level to 2 100 m (Kielland, 1990d).

Habits: At times this is a common butterfly. Males have a fast, direct flight while females fly more slowly and tend to keep to denser bush and undergrowth. Both sexes feed from flowers and males are often found mudpuddling. Specimens may settle on the ground (Pringle *et al.*, 1994). Weak migrations of this species are known to occur (Larsen, 1991c).

Flight period: All year but commonest in summer and autumn. There are distinct wet- and dry-season forms (Kielland, 1990d; Pringle *et al.*, 1994).

Early stages:

Clark, *in* Van Son, 1949: 189.

Egg elongate-conical; 1 mm high and 0,4 mm in diameter; bright red; laid singly; egg stage 10 days. Five larval instars lasting 30 days. First instar larva 1,75 mm long; pale yellow tinged with pinkish anteriorly. In later instars mottled with green; red lateral stripe later changing to dark green; main setae white; shape cylindrical, tapering to slightly forked posterior end; colour of final instar larva variable with two main forms: Light-coloured plain form, without reddish mottling and the yellow dorsal line consisting principally of enlarged yellow minor setae (the latter are not as well developed in the dark form); white marking on the 1st segment is merely a collection of white setae but in the spotted and red-capped form this is composed of a cluster of well-developed moles on a porcelain-white shield. Pupa broader than either *B. aurota* or *B. creona* with the wing-cases proportionally much larger; the lateral projections placed well behind the middle and the cephalic spine is acute and directed obliquely ventrad; colour green or dull cream; pupal stage 25 days.

Clark, *in* Pringle *et al.*, 1994: plate 22, p.382.

“The bright red eggs are laid singly on the leaves of the foodplant. They are 1 mm high by 0,4 mm in diameter. The egg stage lasts about 10 days. There are five larval instars lasting about a month. The final instar larvae are variable in colour. The pupae are attached by cremastral hooks and held upright by a silken girdle. The pupal stage lasts about 25 days.”

Henning, Henning, Joannou & Woodhall, 1997: 341 (photograph of final instar larva and pupa).



Egg and early instar larva of *Belenois gidica*. Images courtesy Allison Sharp.



Final instar larva and pupa of *Belenois gidica*. Images courtesy Allison Sharp.

Larval food:

Boscia species (Capparaceae) [Kielland, 1990d: 61].

Capparis brassii DC. (Capparaceae) [Platt, 1921]. *Capparis fascicularis* DC. (Capparaceae) [Platt, 1921].

Capparis sepiaria L. var. *citrifolia* (Lam.) Toelken (Capparaceae) [Van Son, 1949: 189; as *Capparis citrifolia* Lam.].

Capparis tomentosa Lam. (Capparaceae) [Larsen, 1991 (Botswana); Paré, *vide* Pringle *et al.*, 1994: 296].

Maerua cafra (DC.) Pax (Capparaceae) [Claassens, 2005].

Maerua species (Capparaceae) [Kielland, 1990d: 61].

Salvadora persica L. (Salvadoraceae) [Van Someren, 1974: 317; Sevastopulo, 1981].

Pseudanaphaeis gidica gidica (Godart, [1819])

Pointed Caper White

Pieris gidica Godart, [1819] *in* Latreille & Godart, [1819], [1824]. *Encyclopédie Méthodique. Histoire Naturelle [Zoologie]* 9 Entomologie: 131 (1-328 [1819], 329-828 [1824]. Paris.

Belenois gidica gidica (Godart, [1819]).

Pseudanaphaeis gidica gidica (Godart, [1819]), **comb. nov.** Grishin, 2023a.



Pseudanaphaeis gidica gidica. Male (Wet season form). Left – upperside; right – underside.
Zamaye, northern Cameroon. July 1993. SCC. ABRI-2019-2911.
Images M. Williams ex ABRI Collection.



Pseudanaphaeis gidica gidica. Male (Dry season form). Left – upperside; right – underside.
Adi, Ituri, DRC. 3 24N, 30 47E. 11 April 2014. T. Desloges.
Images courtesy Thomas Desloges.

Type locality: No locality given.

Distribution: Mauritania, Senegal, Gambia, Burkina Faso, Ghana, Ivory Coast (Warren-Gash, pers. comm., 2002), Benin (throughout), Nigeria (north), Niger, Cameroon, Angola, Democratic Republic of Congo.

Specific localities:

Gambia – Fajara, Farasutu, Abuko, Bijilo, Pirang, Tintinto, Yundum, Sukuta, Walikunda, Janjanbureh Island (Jon Baker, pers. comm., May 2020).

Burkina Faso – Poundou (Talbot, 1929).

Ghana – Shai Hills (Larsen, 2005a); Accra Plains (Larsen, 2005a). Benin
– see Coache *et al.*, 2017.

Angola – Loanda (Butler, 1898).

Cameroon – North Cameroons in the neighbourhood of Lake Chad (Aurivillius, 1910); Sidderi (Gaede, 1916).

Democratic Republic of Congo – Mahokia (Hulstaert, 1924); Ituri Forest (Ducarme, 2018); Semuliki Valley (Ducarme, 2018).

occidentis Butler, 1898 (as sp. of *Belenois*). *Transactions of the Entomological Society of London* **1898**: 438 (431-438). Democratic Republic of Congo: “Congo”; Angola: “Loanda”.

tshadica Aurivillius, 1910 *in* Seitz, 1908-25 (as f. of *Pieris gidica*). *Die Gross-Schmetterlinge der Erde*, Stuttgart (2) **13 Die Afrikanischen Tagfalter**: 40 (614 pp.). Cameroon: “North Cameroons in the neighbourhood of Lake Chad”. Holotype in the Swedish Natural History Museum (images available at www2.nrm.se/en/lep_nrm/g).

sulphurea Gaede, 1916 (as var. of *Pieris gidica*). *Internationale Entomologische Zeitschrift* **9**: 105 (105- 106, 109-112, 125-126). Cameroon: “Sidderi, Kamerun”.

masculina Hulstaert, 1924 (as female f. of *Pieris gidica*). *Revue de Zoologie et de Botanique Africaine* **12**: 96 (90-99). Democratic Republic of Congo?: “Mahokia”. Holotype in the Royal Museum for Central Africa, Tervuren, Belgium.

albata Talbot, 1929 (as female f. of *Anapheis* [sic] *gidica gidica*). *Bulletin of the Hill Museum, Witley* **3**: 227 (225-233). Burkina Faso: “Poundou”.

arida Talbot, 1929 (as female f. of *Anapheis* [sic] *gidica gidica*). *Bulletin of the Hill Museum, Witley* **3**: 227 (225-233). Burkina Faso: “Poundou”.

Pseudanaphaeis gidica abyssinica (Lucas, 1852)

African Veined White

Pieris abyssinica Lucas, 1852. *Revue et Magasin de Zoologie Pure et Appliquée* **4**: 328 (324-345).

Pieris abyssinica Lucas, 1852. Trimen & Bowker, 1889.

Belenois (*Anaphaeis*) *gidica* (Godart, 1819). Pringle *et al.*, 1994: 296.

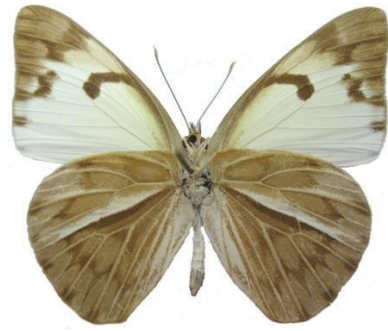
Pseudanaphaeis gidica abyssinica (Lucas, 1852), **comb. nov.** Grishin, 2023a.



Pseudanaphaeis gidica abyssinica. Male (wet season form) (Wingspan 52 mm). Left – upperside; right – underside.

Magadu, KwaZulu-Natal, South Africa. 9 November 2009. M. Williams.

Images M.C. Williams ex Williams Collection.



Pseudanaphaeis gidica abyssinica. Male; dry season form (Wingspan 49 mm). Left – upperside; right – underside.

Manoutsa, Limpopo Province, South Africa. 13 July, 1998. M. Williams.

Images M.C. Williams ex Williams Collection.



Pseudanaphaeis gidica abyssinica. Female (yellow wet season form) (Wingspan 52 mm). Left – upperside; right – underside.

Nibela Peninsula, KwaZulu-Natal, South Africa. 25 November 2010. M. Williams.

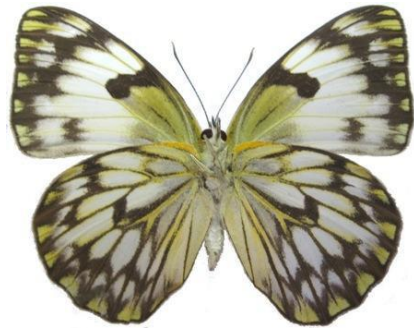
Images M.C. Williams ex Williams Collection.



Pseudanaphaeis gidica abyssinica. Female (pale yellow wet season form) (Wingspan 53 mm). Left – upperside; right – underside.

Bergpan, Limpopo Province, South Africa. 9 May 2010. M. Williams.

Images M.C. Williams ex Williams Collection.



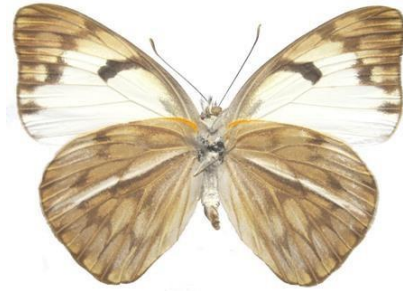
Pseudanaphaeis gidica abyssinica. Female (white wet season form) (Wingspan 51 mm). Left – upperside; right – underside.
Nibela Peninsula, KwaZulu-Natal, South Africa. 23 November 2010. M. Williams.
Images M.C. Williams ex Williams Collection.



Pseudanaphaeis gidica abyssinica. Female (dry season form) (Wingspan 47 mm). Left – upperside; right – underside.
Buzzard Mountain Retreat, Limpopo Province, South Africa. 21 September 2003. M. Williams.
Images M.C. Williams ex Williams Collection.



Pseudanaphaeis gidica abyssinica. Female – male-like WSF. Left – upperside; right – underside.
Mabelikwe, Limpopo Province, South Africa. 27 April 2010. J. Greyling.
Images M.C. Williams ex Greyling Collection.



Pseudanaphaeis gidica abyssinica. Female – male-like DSF. Left – upperside; right – underside.
Mabelikwe, Limpopo Province, South Africa. 19 July 2010. J. Greyling.
Images M.C. Williams ex Greyling Collection

Type locality: [Ethiopia]: “Abyssinie”.

Distribution: Ethiopia, Somalia, Uganda, Democratic Republic of Congo (south-east), Kenya, Tanzania, Malawi, Zambia, Mozambique, Zimbabwe, Botswana, Namibia (north), South Africa (Limpopo Province, Mpumalanga, KwaZulu-Natal, Eastern Cape Province, Western Cape Province – south-east), Swaziland.

Specific localities:

Ethiopia – Mahal Uonz (Storace, 1948).

Somalia – Somalie, sur les plateaux de Centre (Ungemach, 1932).

Uganda – S.E. Ruwenzori, 3500 feet (Talbot, 1943); Kalinzu Forest (Stoneham, 1957).

Democratic Republic of Congo – Rutschuru-Ebene (Rebel, 1914); Kivu, Kissenji (Talbot, 1943).

Tanzania – In most parts of the country (Kielland, 1990d); Katavi National Park (Fitzherbert *et al.*, 2006).

Malawi – Mt Mulanje (Congdon *et al.*, 2010); Zomba Mountain (Congdon *et al.*, 2010).

Mozambique – Mt Mecula [-12.0772 37.6297] (Congdon & Bayliss, 2013).

Botswana – Chobe area (Larsen, 1991); Okavango (Larsen, 1991); Francistown (Larsen, 1991; single record); Kuke Pan (R. Vane-Wright *vide* Larsen, 1991; single record); Shashe (G. Bailey *vide* Larsen, 1991; single record); Maun (Larsen, 1991); Kasane area (Larsen, 1991).

Limpopo Province – Mica (Swanepoel, 1953); Lekgalameetse Nature Reserve (“Malta Forest”) (Swanepoel, 1953); Mokeetzi (Swanepoel, 1953); Sibasa (Swanepoel, 1953); Waterpoort (Swanepoel, 1953); Saltpan (Swanepoel, 1953); Limpopo River (Swanepoel, 1953); Manoutsa; Buzzard Mountain Retreat [-23.012 29.765] (Williams, unpub., 2015).

Mpumalanga – Barberton (Swanepoel, 1953); Buffelskloof Nature Reserve (Williams).

KwaZulu-Natal – Oribi Gorge (Swanepoel, 1953); Durban (Swanepoel, 1953); Estcourt (Swanepoel, 1953); Empangeni (Swanepoel, 1953); St. Lucia Bay (Swanepoel, 1953); Mkuze (Swanepoel, 1953); Kosi Bay Nature Reserve (Pringle & Kyle, 2002); Tembe Nature Reserve (Pringle & Kyle, 2002); Ndumo Nature Reserve (Pringle & Kyle, 2002); Jozini (male wet season form illustrated above).

Eastern Cape Province – Hankey (Swanepoel, 1953); Port Elizabeth (Swanepoel, 1953); Grahamstown (Swanepoel, 1953); Port Alfred (Swanepoel, 1953); Zuurberg (Swanepoel, 1953); Queenstown (Swanepoel, 1953); Hogsback (Swanepoel, 1953); East London (Swanepoel, 1953); Kei River (Swanepoel, 1953); Bashee River (Swanepoel, 1953); Port St. Johns (Swanepoel, 1953).

Western Cape Province – Knysna (Swanepoel, 1953); Voorbaai, near Mossel Bay (G. van den Berg).

Swaziland – Balegane (Swanepoel, 1953); Mlawula N. R. (www.sntc.org.sz).

doubledayi Wallengren, 1857 (as sp. of *Pinacopteryx*). *Öfversigt af Kongl. Vetenskaps-Akademiens Förhandlingar. Stockholm* annis 1838-1845. *Collecta* (n.s.) **2** (4): 8 (55 pp.). South Africa: “Caffraria”. Holotype in the Swedish Natural History Museum (images available at www2.nrm.se/en/lep_nrm/d).

westwoodi Wallengren, 1857 (as sp. of *Pinacopteryx*). *Öfversigt af Kongl. Vetenskaps-Akademiens Förhandlingar. Stockholm* annis 1838-1845. *Collecta* (n.s.) **2** (4): 9 (55 pp.). South Africa: “Caffraria”.

allica Oberthür, 1878 (as sp. of *Pieris*). *Études d'Entomologie* **3**: 16 (1-48). “Lac de Tzana”.

simplex Rebel, 1914 (as ab. of *Pieris gidica* var. *westwoodi*). *Annalen des (K.K.) Naturhistorischen Museums. Wien* **28**: 226 (219-294). Democratic Republic of Congo: “Rutschuru-Ebene”.

pallida Gaede, 1916 (as var. of *Pieris gidica*). *Internationale Entomologische Zeitschrift* **9**: 106 (105- 106, 109-112, 125-126). Rwanda?: “Kiwu, Deutsch-Ostafrika”.

texturata Ungemach, 1932 (as female f. of *Pieris gidica westwoodi*). *Mémoires de la Société des Sciences Naturelles (et Physiques) du Maroc* **32**: 28 (1-122). Somalia: “Somalie, sur les plateaux de Centre”.

crassilinea Ungemach, 1932 (as female f. of *Pieris gidica abyssinica*). *Mémoires de la Société des Sciences Naturelles (et Physiques) du Maroc* **32**: 30 (1-122). Ethiopia: “Abyssinie”.

nigrescens Talbot, 1943 (as male f. of *Anapheis* [sic] *gidica westwoodi*). *Annals and Magazine of Natural History* (11) **10**: 307 (305-336). Uganda: “S.E. Ruwenzori, 3500 feet”.

nigrifusa Talbot, 1943 (as female f. of *Anapheis* [sic] *gidica westwoodi*). *Annals and Magazine of*

Natural History (11) **10**: 308 (305-336). Uganda: “S.E. Ruwenzori, 3500 feet”.

masformis Talbot, 1943 (as female f. of *Anapheis* [sic] *gidica westwoodi*). *Annals and Magazine of Natural History* (11) **10**: 308 (305-336). Uganda: “S.E. Ruwenzori, 3500 feet”.

subochracea Talbot, 1943 (as female f. of *Anapheis* [sic] *gidica westwoodi*). *Annals and Magazine of Natural History* (11) **10**: 308 (305-336). Democratic Republic of Congo: “Congo, Kivu, Kissenji”.

deficiens Dufrane, 1947 (as ab. of *Anapheis* [sic] *gidica occidentalis*). *Bulletin et Annales de la Société Royale Entomologique de Belgique* **83**: 47 (46-73). “Afrique Orientale”.

androides Storace, 1948 (as female f. of *Glycestha gidica westwoodi*). *Annali del Museo Civico di Storia Naturale (di Genova) Giacomo Doria* **63**: 264 (263-265). Ethiopia: “Mahal Unz (Scio, Abissinia, presso Let Marefià)”.

centralis Stoneham, 1957 (as ssp. of *Anapheis* [sic] *gidica*). *Bulletin of the Stoneham Museum* (68): [3] ([4 pp.]). Uganda: “Kalinzu Forest”.

Pseudanaphaeis gidica hypoxantha (Ungemach, 1932)

Ethiopian Pointed Caper White

Pieris gidica hypoxantha Ungemach, 1932. *Mémoires de la Société des Sciences Naturelles (et Physiques) du Maroc* **32**: 27 (1-122).

Pseudanaphaeis gidica hypoxantha (Ungemach, 1932), **comb. nov.** Grishin, 2023a.

Type locality: [Ethiopia]: “Gambela”.

Distribution: Ethiopia (Gambela area).

Note: Larsen (2005a) does not believe that this subspecies is valid but does not formally change its status.