

Genus *Spalgis* Moore, 1879 Harvesters

Proceedings of the Zoological Society of London **1879**: 137 (136-144).

Type-species: *Geridus epeus* Westwood, by monotypy [extralimital].

The genus *Spalgis* belongs to the Family Lycaenidae Leach, 1815; Subfamily Miletinae Reuter, 1896; Tribe Spalgini Toxopeus, 1929. There is no other genus in the Tribe Spalgini in the Afrotropical Region.

Spalgis (**Harvesters**) is a genus containing three Afrotropical and four Oriental species (including the type species of the genus). None of the Afrotropical species has a distribution that extends extraliminally. Females oviposit among coccid prey. *Oecophylla* ants are thought to prevent egg-laying when they are attending coccids. Larvae live among colonies of prey which may be without ants or might be attended by a wide variety of different genera including *Crematogaster*, *Oecophylla* and *Anaplocnemis*. Larvae may actually enter *Crematogaster* nests to prey on intranidal coccids. Larvae are not apparently attended by ants and seem to be largely ignored by them. Usually larvae are covered with debris composed of the waxy secretions and the cuticles of prey that have become entangled in their setae. This covering apparently serves as a protection against ants since artificially denuded larvae are attacked when introduced into ant-tended colonies whereas larvae with their covering intact are not. A scarcity of larvae in *Oecophylla* attended coccid colonies is probably due to prevention of oviposition in the vicinity of these colonies. Larvae introduced into such colonies can survive and feed in them. The DNO and TOs are absent. Pupation usually is somewhat away from prey colonies. Larvae are predatory on mealy bugs (Coccidoidea) on a very wide range of host plants. Adult emergence is evidently without any vestiture of secondary scales. Sources (by species) (Cottrell, 1984): *S. epius* (Westwood) (Aitken, 1894; Ali, 1978; Ayyar, 1929; Bell, 1916, 24: 671; Carter, 1956; Chacko & Bhat, 1976; Chacko, Bhat & Ramanarayan, 1977; Das, 1960; Fletcher, 1919; Greathead, 1971; Green, 1902; Green, 1922, 5: 383, 389; Jalil & Kabir, 1972; Le Pelley, 1943; Misra, 1920; de Niceville, 1890; Paerels, 1924; Pushpaveni, Rao & Rao, 1974; Rutherford, 1914a, b, c, d; Smith, 1914; Speyer, 1918; Van der Goot, 1917); *S. lemolea* H. H. Druce (Boulard, 1968; Fabres, 1981; Fabres & Matile-Ferrero, 1980; Greathead, 1971; Hancock, 1926; Hargreaves, 1936; Hinton, 1958, 1974; Holland, 1892; Jackson, 1937; James, 1932; Lamborn, 1914a, b; Le Pelley, 1968; Leuschner & Nwanze, 1978; Mellor, 1929; Nwanze, 1977; Nwanze, Leuschner & Ezumah, 1979; Sevastopulo, 1958.

**Spalgis jacksoni* Stempffer, 1967 Dull Harvester

Spalgis jacksoni Stempffer, 1967. *Bulletin de l'Institut Fondamental de l'Afrique Noire* (A) **29**: 998 (978-1000).
Spalgis jacksoni Stempffer, 1967. d'Abrera, 2009: 688.

Type locality: Uganda: "Bwamba Mongiro".

Distribution: Uganda, Democratic Republic of Congo, Tanzania.

Habitat: Forest.

Habits: The flight is weak and specimens usually occur together in localized populations in the forest (Kielland, 1990d). Males are known to mudpuddle (Kielland, 1990d).

Early stages: Nothing published.

Larval food: Nothing published.

***Spalgis jacksoni jacksoni* Stempffer, 1967**
Dull Harvester

Spalgis jacksoni Stempffer, 1967. *Bulletin de l'Institut Fondamental de l'Afrique Noire* (A) **29**: 998 (978-1000).
Spalgis jacksoni jacksoni Stempffer, 1967. d'Abreera, 2009: 688.

Type locality: Uganda: “Bwamba Mongiro”.

Distribution: Uganda (west).

Specific localities:

Uganda – Bwamba Mongiro (TL); Semuliki N.P. (H. Selb, unpublished, 2016).

***Spalgis jacksoni stempfferi* Kielland, 1985**
Kigoma Dull Harvester

Spalgis jacksoni stempfferi Kielland, 1985. *Lambillionea* **85**: 109 (95-112).
Spalgis jacksoni stempfferi Kielland, 1985. d'Abreera, 2009: 688.

Type locality: Tanzania: “Kigoma, Kasye Forest, 1000 m”.

Distribution: Democratic Republic of Congo (east), Tanzania.

Specific localities:

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

Tanzania – Kasye Forest (TL). In Tanzania it is known only from the type locality, which is threatened with destruction (Kielland, 1990d).

****Spalgis lemolea* Druce, 1890**
Bordered Harvester

Spalgis lemolea Druce, 1890. *Annals and Magazine of Natural History* (6) **5**: 26 (24-31).
Spalgis lemolea Druce, 1890. Dickson & Kroon, 1978.
Spalgis lemolea Druce, 1890. Pringle *et al.*, 1994: 139.
Spalgis lemolea Druce, 1890. d'Abreera, 2009: 687.



Spalgis lemolea lemolea. Male. Wingspan 23 mm. Left – upperside; right – underside.
Ndola, Zambia. 30 December 1981. AJG. Gardiner Collection.
Images M.C. Williams ex Gardiner Collection.



Spalgis lemolea lemolea. Female. Left – upperside; right – underside.
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Spalgis lemolea lemolea. Female. Left – upperside; right – underside.
Libreville, Gabon. 15 November 2017. J. Dobson.
Images M.C. Williams ex Dobson Collection.

Alternative common name: African Apefly (Larsen, 1991c).

Type locality: Nigeria: “Lagos”.

Distribution: Senegal, Gambia, Guinea-Bissau (D’Abrera, 1980), Guinea, Liberia, Ivory Coast, Ghana, Togo, Benin, Nigeria, Cameroon, Gabon, Angola, Democratic Republic of Congo, Ethiopia, Uganda, Kenya, Tanzania, Malawi, Zambia, Mozambique (Kielland, 1990d), Zimbabwe, Botswana.

Habitat: Forest and dense savanna (Guinea savanna and Miombo woodland). Thick riverine bush (Pinhey, *vide* Pringle *et al.* (1994). Usually absent from primary forest (Larsen, 2005a). In Tanzania at altitudes from near sea-level to 1 800 m (Kielland, 1990d).

Habits: Usually not numerous but population irruptions are not uncommon, e.g. the north-eastern suburbs of Accra, Ghana (Larsen, 2005a). Specimens are usually encountered singly, flying slowly among the branches of large trees. S.C. Collins once came across large numbers at Kisumu (Larsen, 1991c). Larsen (1991c) encountered a large irruption in Kinshasa (DRC), in August 1988. Many of these specimens came to water, as well as to fresh and dry bird droppings. Bampton, *vide* Pringle *et al.* (1994) witnessed a massive irruption of the species in a rubber plantation south of Nkata Bay in Malawi, noting that the rubber plants were heavily infested with a hemipteran belonging to the genus *Planococcus*. Pinhey (*vide* Pringle *et al.*, 1994) observed, at Kariba Gorge in Zimbabwe, that they appeared to be reluctant to fly except during the hottest parts of the day. He also noted that their flight was similar to that of species of *Lachnocnema*. Males appear to be territorial and adults are thought to feed on the secretions of the Hemiptera with which they are associated (Francis & Gardiner, 2020).

Early stages:

Good, 1892: 201 [Psyche 6: 201].

Lamborn, 1911: 105 [Proc. ent. Soc. Lond 1911: pp. civ-cv; 1912: p. xviii; subspecies *pilos*].

Lamborn, 1914: 475 [subspecies *pilos*].

The larva apparently resembles the coccids upon which it feeds and lives among them. Tiny coccids can sometimes be found moving in the material attached to the dorsum of the larva.

Mellor, 1929: 8 [Proc. Ent. Soc. Lond. 4: 8].

Jackson, 1937: 220 [Bunyoro, Bugoma Forest, Uganda; subspecies *lemolea*].

“Larva. Broad and slug-like, either black or dark grey, and hairy. The colouring, however, is usually invisible for it covers itself with a white waxy secretion produced by the Coccid and is then very hard to detect. Length, 15 mm. Pupa. The pupa is an interesting example of protective coloration. It is placed most conspicuously on the upper surfaces of the leaves and coloured in whites, greys and blacks to represent a bird-dropping, which it does exactly. The anal extremity is tapered to a narrow square-ended stalk, which serves as an attachment to the leaf. From here, the abdominal segments are much broadened and intersegmentally contracted, being thus roughly spherical. There follows a slight waist between these and the thorax, which is slightly domed and falls vertically to the leaf. The head-case is placed beneath the pupa on the edge of the flattened ventral surface. From the wing-cases and including them, round the front of the thorax, the lateral margins are white, as also is the posterior half of the abdominal segments, while the remainder is blackish-brown mottled and irrorated with white or cream. Length, 7 mm.; breadth, 4 mm. at broadest point. It seems that the protection afforded by its coloration is most effective, for out of 15-20 pupae taken from one small bush, not one was parasitised, and judging by the numbers on the bush, both of fresh pupae and empty cases, the birds had not discovered the deception. Locality. Uganda: Bunyoro, Bugoma Forest, September, 1932.”

Henning, S., 1983: 79 [Nova Lisboa, Angola; subspecies *lemolea* (*J. ent. Soc. Sth. Africa* 46: 65)].

Larsen, 1991c: 176.

Apparently independent of ants tending the homopterans, and are not harmed by them. However, females are prevented from ovipositing among hemiptera that are being tended by tailor ants (*Oecophylla* species).

Bampton, in Pringle et al., 1994: 139 [subspecies *lemolea*].

Congdon et al., 2017 [larva].

Francis & Gardiner, 2020. [egg, larva & pupa].



Pupae of *Spalgis lemolea*. Lilongwe, Malawi.
Image courtesy Paul Webb.

Larval food:

Coccids (Hemiptera: Coccidae) living on an ornamental plant [Jackson, 1937: 220].

Dactylopius longispinus Targ.-Tozz. (Hemiptera: Coccidae) [Lamborn, 1912: xviii; Nigeria].

Dactylopius species (Hemiptera: Coccidae) [Bampton, *in* Henning, S., 1983: 79; Nova Lisboa, Angola].

Dactylopius virgatus var. *madagascariensis* Newstead (Hemiptera: Coccidae) [Lamborn, 1914: 475; Nigeria].

Ferrisiana species (Hemiptera: Coccidae) [Larsen, 1991c: 176].

Icerya purchasi (Hemiptera: Monophlebidae) [Francis & Gardiner, 2020].

Nipaecoccus nipae (Hemiptera: Pseudococcidae) [Francis & Gardiner, 2020].

Nipaecoccus sp. (Hemiptera: Pseudococcidae) [Francis & Gardiner, 2020].

Phenacoccus species (Hemiptera: Pseudococcidae) [Larsen, 1991c: 176].

Planococcoides species (Hemiptera: Pseudococcidae) [Larsen, 1991c: 176].

Planococcus ficus (Hemiptera: Pseudococcidae) [Francis & Gardiner, 2020].

Planococcus species (Hemiptera: Pseudococcidae), infesting a cycad [Mellor, *in* Jackson, 1937; Zanzibar].

Planococcus species (Hemiptera: Pseudococcidae) [Bampton, *in* Pringle *et al.*, 1994: 139].

Pseudococcus species (Hemiptera: Pseudococcidae) [Larsen, 1991c: 175].

Pseudococcus longispinus (Hemiptera: Pseudococcidae) [Francis & Gardiner, 2020].

Associated ant:

None recorded.

Spalgis lemolea lemolea Druce, 1890

Bordered Harvester

Spalgis lemolea Druce, 1890. *Annals and Magazine of Natural History* (6) 5: 26 (24-31).

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Spalgis lemolea lemolea. Female. Left – upperside; right – underside.
Libreville, Gabon. 15 November 2017. J. Dobson.
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Type locality: Nigeria: “Lagos”.

Distribution: Gabon, Angola, Democratic Republic of Congo, Ethiopia, Uganda, Kenya, Tanzania, Malawi, Zambia (throughout), Mozambique (Kielland, 1990d), Zimbabwe (north), Botswana (one sight record – Larsen, unpublished ms, 1995).

Specific localities:

Gabon – Ogove River (Holland, 1890); Libreville (Vande Weghe, 2010); Lake Evaro (Vande Weghe, 2010); Keri (Vande Weghe, 2010); Waka (Vande Weghe, 2010); Makokou (Vande Weghe, 2010); Iguella (Vande Weghe, 2010); Gamba (Vande Weghe, 2010); Franceville (Vande Weghe, 2010).

Angola – Nova Lisboa (Henning, S., 1983).

Democratic Republic of Congo – Kinshasa (Larsen, 1991c); Ituri Forest (Ducarme, 2018); Semuliki Valley (Ducarme, 2018); Mt Mitumba (Ducarme, 2018); Mt Blue (Ducarme, 2018).

Uganda – Bugoma Forest (Jackson, 1937).

Kenya – Nairobi (Larsen, 1991c); Kisumu (Larsen, 1991c); Shimba Hills (Larsen, 1991c); Malakisi (Larsen, 1991c); Kakamega Forest (Larsen, 1991c).

Tanzania – Mpanda (Kielland, 1990d); Kigoma (Kielland, 1990d); Oldeani (Kielland, 1990d); Arusha (Kielland, 1990d); Usambara Mountains (Kielland, 1990d); Uluguru Mountains (Kielland, 1990d); Nguru Mountains (Kielland, 1990d); Pugu Hills (Kielland, 1990d).

Malawi – Nkata Bay (Bampton, *vide* Pringle *et al.*, 1994); Nyika N.P. (J. Timberlake, pers. comm., 2019).

Zambia – Mwinilunga (Heath *et al.*, 2002); Ikelenge (Heath *et al.*, 2002); Ndola (Heath *et al.*, 2002); Mufulira (Heath *et al.*, 2002); Lumangwe Falls (Heath *et al.*, 2002); Samfya (Heath *et al.*, 2002); Mbala (Heath *et al.*, 2002); Kabweluma Falls (male illustrated above).

Mozambique – Mt Namuli (Congdon *et al.*, 2010); Mt Mabu.

Zimbabwe – Victoria Falls (Irving, *vide* Pringle *et al.*, 1994); Kariba Gorge (Pinhey, *vide* Pringle *et al.*, 1994); Chirundu (Francis & Gardiner, 2020); Harare (Francis & Gardiner, 2020).

s-signata Holland, 1890 (as sp. of *Spalgis*). *Psyche, a Journal of Entomology. Cambridge, Mass.* 5: 426 (423-431). Gabon: “Gaboon, upper waters of the river Ogove”.

***Spalgis lemolea pilos* Druce, 1890**
Western Bordered Harvester

Spalgis pilos Druce, 1890. *Annals and Magazine of Natural History* (6) 5: 27 (24-31).

Spalgis lemolea pilos Druce, 1890. Larsen, 2005a: 117.

Spalgis lemolea pilos Druce, 1890. d’Abrera, 2009: 687.

Type locality: Gambia: “Gambia”.

Distribution: Senegal, Gambia, Guinea-Bissau (D’Abrera, 1980), Guinea, Liberia, Ivory Coast, Ghana, Togo, Benin (south, central), Nigeria, Cameroon.

Specific localities:

Gambia – Tanji, Kerr Serign, Kololi, Abuko, Brusubi, Lamin (Jon Baker, pers. comm, May 2020).

Guinea – Ziama (Safian *et al.*, 2020).

Liberia – Wologizi (Safian *et al.*, 2020); Wonegizi (Safian *et al.*, 2020).

Ghana – Accra (Larsen, 2005a); Bobiri Butterfly Sanctuary (Larsen *et al.*, 2007); Boabeng-Fiema Monkey Sanctuary (Larsen *et al.*, 2009).

Togo – Klouto [6°57'15.07"N 0°34'54.40"E] (Safian *et al.*, 2009).

Benin – Houeyogbe Forest (Coache & Rainon, 2016); see Coache *et al.*, 2017.

Nigeria – Lagos.

Cameroon – Korup (Larsen, 2005a).

latimarginata Sharpe, 1890 (as sp. of *Spalgis*). *Annals and Magazine of Natural History* (6) 6: 347 (346-350). Senegal/Gambia: “Senegambia”.

****Spalgis tintinga* (Boisduval, 1833)**

Malagasy Harvester

[*Lycaena*] ? *tinting* Boisduval, 1833. *Nouvelles Annales du Muséum d'Histoire Naturelle, Paris* 2: 175 (149-270).
Spalgis tintinga Boisduval, 1890. d'Abbrera, 2009: 687. [date of authorship erroneous]

Type locality: Madagascar: "Tintingue".

Distribution: Madagascar.

Specific localities:

Madagascar – Tintingue (TL); eastern Masoala (Kremen *et al.*, 2001).

Habitat: Forest (Lees *et al.*, 2003).

Early stages: Nothing published.

Larval food: Nothing published.

docus Druce, 1875 (as sp. of *Miletus*). *Cistula Entomologica* 1: 361 (357-363). Madagascar:
"Madagascar".