

## HOST LIST OF AVIAN BROOD PARASITES - 4 - PICIFORMES; Indicatoridae

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Friedmann's 1955 monograph lists 11 species. More recent summaries of honeyguide biology presented by Short and Horne (1985, 1988, 2001).

### ***Prodotiscus***

*Prodotiscus* Sundevall 1850, Öfversigt af Kongel Vetenskaps Akademiens Förhandlingar 7, p. 109.

**Cassin's Honeyguide, *Prodotiscus insignis* (Cassin) 1856**, Proceedings of the Academy of Natural Sciences of Philadelphia 8, p. 157, (Moonda River, Gaboon).

Distribution. – West and central Africa.

Host list. – No definite hosts (Short and Horne 1985), but likely hosts include Black-throated Wattle-eye *Platysteira peltata*, Buff-throated Apalis *Apalis rufogularis*, and possibly Green White-eye *Zosterops virens*

**Green-backed Honeyguide, *Prodotiscus zambesiae* Shelley 1894**, Ibis, ser. 6, vol. 6, p. 8, (Zomba, Nyasaland [Malawi]).

Distribution. – East and central Africa.

Taxonomic notes. – This taxon treated as subspecies of *Indicator insignis* in Friedmann 1955, but see Friedmann 1971.

Host list. – Based on Short and Horne 1985, 1988, 2001; see also Vernon 1987:

#### PARIDAE

Black-Tit, *Parus niger* (possible host; inclusion based on adult honeyguide seen entering nest of this species)

#### MONARCHIDAE

% African Paradise-Flycatcher, *Terpsiphone viridis*

#### VANGINIAE

% Black-throated Wattle-eye, *Platysteira peltata*

#### MUSCICAPIDAE

% Dusky Alseonax, *Muscicapa adusta*

#### ZOSTEROPIDAE

## African Yellow White-eye, *Zosterops senegalensis*

% Broad-ringed White-eye, *Zosterops poliogaster*

% White-breasted White-eye, *Zosterops abyssinicus*

#### NECTARINIIDAE

% Amethyst Sunbird, *Nectarinia amethystina*

**Wahlberg's Honeyguide, *Prodotiscus regulus* Sundevall 1850**, Öfversigt af Kongel Vetenskaps Akademiens Förhandlingar, vol. 7, p. 109, ("Caffraria inferiori et superiori", type from Mohapoani, Witfontein Berge, Western Transvaal).

Distribution. – West, east and south Africa.

Host list. – Based on Short and Horne 1985, 1988, 2001; see also Friedmann 1955, 1968b; Maclean 1971; Vernon and Dean 2004b:

#### APODIDAE

Horus Swift, *Apus horus* [possible host; honeyguide seen emerging from swallow nest that had been taken over by

this swift]

STURNIDAE

African Pied Starling, *Spreo bicolor* (possible host)

HIRUNDINIDAE

Lesser Striped-Swallow, *Hirundo abyssinica*

CISTICOLIDAE

% Gray-backed Cameroptera, *Cameroptera brachyura*

Grey Cisticola, *Cisticola rufilatus* (possible host, honeyguide chased by pair of this species)

Wailing Cisticola, *Cisticola lais* [based on Hosken 1966; however, this warbler is not a hole nester and is considered an unlikely host species]

% Piping Cisticola, *Cisticola fulvicapillus*

Tabora Cisticola, *Cisticola angusticauda*

Lazy Cisticola, *Cisticola aberrans*

Rattling Cisticola, *Cisticola chinianus*

Tinkling Cisticola, *Cisticola tinniens*

Tawny-flanked Prinia, *Prinia subflava*

Black-chested Prinia, *Prinia flavicans*

Karoo Prinia, *Prinia maculosa*

ZOSTEROPIDAE

Green White-eye, *Zosterops virens* (suspected host)

NECTARINIIDAE

Scarlet-chested Sunbird, *Nectarina senegalensis* (possible host, honeyguide chased by pair of this species)

PASSERIDAE

% Yellow-throated Petronia, *Petronia superciliaris*

### ***Melignomon***

*Melignomon* Reichenow 1898, Ornithologische Monatsberichte, vol. 6, p. 22.

**Yellow-footed Honeyguide, *Melignomon eisentrauti* Louette 1981**, Revue de zoologie africaine 95, p. 131, Grassfield, Mt. Nimba, Liberia.

Distribution. – West Africa (northeastern Liberia and southwestern Cameroon).

Taxonomic notes. – May be conspecific with *Melignomon zenkeri* (see Colston 1981).

Host list. – No known host species (Short and Horne 1985, 1988, 2001).

**Zenker's Honeyguide, *Melignomon zenkeri* Reichenow 1898**, Ornithologische Monatsberichte, vol. 6, p. 22, (Jaunde [Jaoundé], Cameroons).

Distribution. – Central Africa.

Host list. – No known host species (Short and Horne 1985, 1988, 2001)

### ***Indicator***

*Indicator* Stephens 1815, General Zoology, or systematic natural history by George Kearsley Shaw; [and afterwards (Vol. IX - XIV) by J. F. Stephens], with plates from the first authorities and most select specimens engraved principally by Mr. Heath [and afterwards Mrs. Griffith], vol. 9, pt. 1, p. 131.

**Spotted Honeyguide, *Indicator maculatus* G. R. Gray 1847**, The Genera of Birds: comprising their generic characters ... and an extensive list of species, vol. 2, p. 451, pl. 113 (No locality; type in British Museum from Gambia).

Distribution. – West and central Africa.

Host list. – No known hosts; suspected host species include: Buff-spotted Woodpecker *Campethera nivosa*, Gray-throated Barbet *Gymnobucco bonapartei* and other barbets of genus *Gymnobucco* (Short and Horne 1985, 1988).

**Scaly-throated Honeyguide, *Indicator variegatus* Lesson 1830**, *Traité d'ornithologie*, livr. 2, p. 155 (Africa; restricted to Knysna, Cape Province [Grant and Mackworth-Praed 1938]).

Distribution. – South and east Africa.

Host list. – Based on Short and Horne 1985, 1988, 2001; see also Friedmann 1955, 1958, Vernon and Dean 2004a: Additional species that are possible or likely hosts include: Rufous-chested Wryneck *Jynx ruficollis*, Mombasa Woodpecker *Campethera mombassica*, Green-backed Woodpecker *Campethra cailliautii*, Green Barbet *Stactolaema olivacea*, Green Tickerbird *Pogoniulus simplex* and Brown-breasted Barbet *Lybius melanopterus*

#### APODIDAE

Horus Swift, *Micropus horus* (unsubstantiated)

#### CAPITONIDAE

Crested Barbet, *Trachyphonus vaillantii* (unsubstantiated)

White-eared Barbet, *Stactolaema leucotis* (unsubstantiated)

% Whyte's Barbet, *Stactolaema whytii*

% Black-collared Barbet, *Lybius torquatus*

% Yellow-rumped Barbet, *Pogoniulus bilineatus*

#### PICIDAE

% Nubian Woodpecker, *Campethera nubica*

% Golden-tailed Woodpecker, *Campethera abingoni*

Knysna Woodpecker, *Campethera notata*

% Olive Woodpecker, *Dendropicos griseocephalus*

% Gray Woodpecker, *Dendropicos goertae*

% Cardinal Woodpecker, *Dendropicos fuscescens*

% Bearded Woodpecker, *Dendropicos namaquus* (Davey 1994)

#### MUSCICAPIDAE

Mocking Cliff-Chat, *Thamnolaea cinnamomeiventris* (unsubstantiated)

#### PASSERIDAE

Yellow-throated Petronia, *Petronia superciliaris* (unsubstantiated)

**Greater Honeyguide, *Indicator indicator* (Sparman) 1777**, *Philosophical Transactions of the Royal Society of London*, vol. 67, p. 43, pl. 1, (Great Fish River, near Somerset East, Cape Province).

Distribution. – Sub-Saharan Africa.

Host list. – Based on Short and Horne 1985, 1988, 2001; see also Friedmann 1955, 1968b, Berruti et al. 1995, Spottiswoode and Colebrook-Robjent 2007, Spottiswoode et al. 2012: Additional species that are possible hosts include: Yellow-rumped Tinkerbird, *Pogoniulus bilineatus*; Red-fronted Tinkerbird, *Pogoniulus pusillus*; Cape Bulbul, *Pycnonotus capensis*; Zanzibar Sombre Greenbul, *Andropadus importunus*; Fork-tailed Drongo, *Dicrurus adsimilis*; Southern Boubou, *Laniarius ferrugineus*; Black-backed Puffback, *Dryoscopus cubla*; African Black-headed Oriole, *Oriolus larvatus*; Cape Rock-Thrush, *Monticola rupestris*; Violet-backed Starling, *Cinnyricinclus leucogaster*

Nesting behavior described by Spottiswoode and Koorevaar 2011; Spottiswoode et al. 2012 have shown divergent mtDNA lineages between honeyguides associated with 2 groups of host species: honeyguides parasitizing hosts breeding in **terrestrial burrows** (Little Bee-eater *Merops pusillus*, Swallow-tailed Bee-eater *Merops hirundineus*, Gray-headed Kingfisher *Halcyon leucocephala*) and honeyguides parasitizing hosts breeding in **tree cavities** (Green Wood-Hoopoe *Phoeniculus purpureus*, Common Scimitar-bill *Rhinopomastus cyanomelas*, African Hoopoe *Upupa africana*, Striped Kingfisher *Halcyon chelicuti*).

#### ALCEDINIDAE

% African Pygmy Kingfisher, *Ispidina Geyx picta*

HALCYONIDAE

% Gray-headed Kingfisher, *Halcyon leucocephala*

% Brown-hooded Kingfisher, *Halcyon albiventris*

% Striped Kingfisher, *Halcyon chelicuti*

MEROPIDAE

% White-fronted Bee-eater, *Merops bullockoides*

% Little Bee-eater, *Merops pusillus*

% Cinnamon-chested Bee-eater, *Merops oreobates*

% Swallow-tailed Bee-eater, *Merops hirundineus*

% Little Green Bee-eater, *Merops orientalis*

% Boehm's Bee-eater, *Merops boehmi*

% Carmine Bee-eater, *Merops nubius*

% Madagascar Bee-eater, *Merops superciliosa*

CORACIIDAE

% Abyssinian Roller, *Coracias abyssinicus*

PHOENICULIDAE

% Green Wood-Hoopoe, *Phoeniculus purpureus*

RHINOPOMASTIDAE

% Abyssinian Scimitar-bill, *Rhinopomastus minor*

% Common Scimitar-bill, *Rhinopomastus cyanomelas*

UPUPIDAE

% African Hoopoe, *Upupa africana*

LYBIIDAE

% Crested Barbet, *Trachyphonus vaillantii*

% Pied Barbet, *Tricholaema leucomelas*

% Black-collared Barbet, *Lybius torquatus*

PICIDAE

% Rufous-breasted Wryneck, *Jynx ruficollis*

Fine-banded Woodpecker, *Campethera taeniolaema*

% Nubian Woodpecker, *Campethera nubica*

% Golden-tailed Woodpecker, *Campethera abingoni*

% Knysna Woodpecker, *Campethera notata*

% Tullberg's Woodpecker, *Campethera tullbergi*

% Gray Woodpecker, *Dendropicos goertae*

Cardinal Woodpecker, *Dendropicos fuscescens* (likely host)

HIRUNDINIDAE

Blue Swallow, *Hirundo atrocaerulea* (Berruti et al. 1995)

% Greater Striped Martin, *Hirundo cucullata*

% White-throated Swallow, *Hirundo albigularis*

% Rufous-chested Swallow, *Hirundo semirufa*

% Banded Martin, *Riparia cincta*

STURNIDAE

Violet-backed Starling, *Cinnyricinclus leucogaster* (honeyguide host, uncertain which species of *Indicator*)

% Pied Starling, *Spreo bicolor*

% Blue-eared Glossy-Starling, *Lamprotornis chalybeus sycobius*

% Red-shouldered Glossy-Starling, *Lamprotornis nitens culminator*

PARIDAE

% Black-Tit, *Parus niger*

NECTARINIIDAE

% Scarlet-chested Sunbird, *Nectarina senegalensis*

MUSCICAPIDAE

% Southern Anteater Chat, *Myrmecocichla formicivora*

% Northern Anteater Chat, *Myrmecocichla aethiops*

Capped Wheatear, *Oenanthe pileata* (Spottiswoode and Colebrook-Robjent 2007)

## PASSERIDAE

- % Yellow-throated Petronia, *Petronia superciliaris*
- % Gray-headed Sparrow, *Passer griseus*

**Malaysian Honeyguide, *Indicator archipelagicus* Temminck 1832**, in Temminck and Laugier de Chartrouse, Nouveau recueil de planches coloriées d'oiseaux, pour servir de suite et de complément aux planches enluminées de Buffon, livr. 91, pl. 542, fig. 1, (Pontianak, Borneo).

- Distribution. – Southeast Asia in Malay peninsula, Sumatra and Borneo.
- Host list. – No known hosts.

**Lesser Honeyguide, *Indicator minor* Stephens 1815**, General Zoology, or systematic natural history by George Kearsley Shaw; [and afterwards (Vol. IX - XIV) by J. F. Stephens], with plates from the first authorities and most select specimens engraved principally by Mr. Heath [and afterwards Mrs. Griffith], vol. 9, pt. 1, p. 140, (Cape of Good Hope = Zwartkop River, Uitenhage Division, Cape Province).

- Distribution. – Sub-Saharan Africa.
- Host list. – Based on Short and Horne 1985, 1988, 2001; see also Friedmann 1955, 1958, Spottiswoode 1994, Colebrook-Robjent 1984. Additional species that are possible hosts or have been suggested as hosts include: Green Woodhoopoe *Phoeniculus purpureus*; glossy-starling *Lamprotornis* sp., and rock thrush *Monticola* sp.

## HALCYONIDAE

- % Striped Kingfisher, *Halcyon chelicuti*

## MEROPIDAE

- % Cinnamon-chested Bee-eater, *Merops oreobates*
- % Little Bee-eater, *Merops pusillus*

## LYBIIDAE

- Grey-throated Barbet, *Gymnobucco bonapartei* (likely host)
- White-eared Barbet, *Stactolaema leucotis* (probable host)
- % Whyte's Barbet, *Stactolaema whytii*
- % Anchieta's Barbet, *Stactolaema anchietae*
- % Green Barbet, *Stactolaema olivacea*
- Red-fronted Tinkerbird, *Pogoniulus pusillus* (uncertain host)
- Yellow-rumped Tinkerbird, *Pogoniulus bilineatus bilineatus* (host of uncertain species of *Indicator*)
- % Pied Barbet, *Tricholaema leucomelas*
- % Red-fronted Barbet, *Tricholaema diademata*
- Miombo Pied Barbet, *Tricholaema frontata* (likely host)
- Vieillot's Barbet, *Lybius vieilloti* (probable host)
- % Chaplin's Barbet, *Lybius chaplini*
- % White-headed Barbet, *Lybius leucocephalus*
- Red-faced Barbet, *Lybius rubrifacies* (likely host)
- Black-billed Barbet, *Lybius guifsobalito* (likely host)
- % Black-collared Barbet, *Lybius torquatus*
- % Double-toothed Barbet, *Lybius bidentatus* (identity of honeyguide not completely certain)
- % Crested Barbet, *Trachyphonus vaillantii*

## PICIDAE

- % Rufous-breasted Wryneck, *Jynx ruficollis*
- % Bennett's Woodpecker, *Campethera bennettii*
- % Golden-tailed Woodpecker, *Campethera abingoni*
- Nubian Woodpecker, *Campethera nubica* (possible host)
- Cardinal Woodpecker, *Dendropicus fuscescens* (probable host; Spottiswoode 1994)
- Olive Woodpecker, *Dendropicus griseocephalus* (likely host)
- Grey Woodpecker, *Dendropicus goertae* (likely host)

HIRUNDINIDAE

- % White-throated Swallow, *Hirundo albigularis*
- Greater Striped Swallow, *Hirundo cucullata* (possible host)

PARIDAE

- Gray Tit, *Parus afer* (probable host)
- Black-Tit, *Parus niger* (host of uncertain species of *Indicator*)

STURNIDAE

- % Pied Starling, *Spreo bicolor*
- % Violet-backed Starling, *Cinnyricinclus leucogaster*

PASSERIDAE

- % Yellow-throated Petronia, *Petronia superciliaris*

**Thick-billed Honeyguide, *Indicator conirostris* (Cassin) 1856**, Proceedings of the Academy of Natural Sciences of Philadelphia 8, p. 156, (Moonda River, Gaboon).

Distribution. – West and central Africa.

Taxonomic notes. – Friedmann (1955) treated this taxon as subspecies of *Indicator minor*; but see Friedmann 1971.

Host list. – Only 1 definite host known (see below; Short and Horne 1985, 1988, 2001), other species that are possible hosts include Naked-faced Barbet *Gymnobucco calvus* and 2 other *Gymnobucco* species; and Yellow-rumped Tinkerbird *Pogoniulus bilineatus* which is considered a doubtful host.

LYBIIDAE

- Gray-throated Barbet *Gymnobucco bonapartei*

**Willcock's Honeyguide, *Indicator willcocksi* Alexander 1901**, Bulletin of the British Ornithologists' Club 12, p. 11, (Prahou, Gold Coast [Ghana]).

Distribution. – West and central Africa.

Taxonomic notes. – This taxon treated as subspecies of *Indicator exilis* by Friedmann 1955.

Host list. – No known host species (Short and Horne 1985, 2001); possible host species is Speckled Tinkerbird *Pogoniulus scolopaceus* (based on observation of this barbet attacking honeyguide for > 1 hr).

**Least Honeyguide, *Indicator exilis* (Cassin) 1856**, Proceedings of the Academy of Natural Sciences of Philadelphia 8, p. 157, (Moonda River, Gaboon).

Distribution. – West and central Africa.

Host list. – No known host species (Short and Horne 1985). Possible host species include Yellow-rumped Tinkerbird *Pogoniulus bilineatus* (Short and Horne 1988; honeyguide observed entering nest cavity of this species, Short and Horne 2001), unidentified barbet *Pogionulus* sp. (Friedmann 1955), and Bronze Sunbird *Nectarinia kilimensis* (J. P. Chapin notes in Short and Horne 2001). This honeyguide seen near nests of Yellow-throated Tinkerbirds *Pogoniulus subsulphurues* and Gray-throated Barbets *Gymnobucco bonapartei* (Short and Horne 2001).

**Dwarf Honeyguide, *Indicator pumilio* Chapin 1958**, Bulletin of the British Ornithologists' Club 78, p. 46, (Tshibata, E. Zaïre).

Distribution. – East-central Africa.

Host list. – No known host species (Short and Horne 1985, 1988, 2001); likely hosts include only Yellow-rumped Tinkerbird *Pogoniulus bilineatus*, Western Green-Tinkerbird *Pogoniulus coryphaeus* and Cardinal Woodpecker *Dendropicos fuscescens*.

**Pallid Honeyguide, *Indicator meliphilus* (Oberholser) 1905**, Proceedings of the U.S. National Museum 28, p. 869 (Taveta, Kenya Colony [Kenya]).

Distribution. – East and central Africa.

Taxonomic notes. – Friedmann (1955) treated this taxon as subspecies of *Indicator exilis*. The name *Indicator narokensis* Jackson 1906 may be a synonym of this taxon (Short et al. 1987), but that taxon later treated as a separate species – Kilimanjaro Honeyguide – with no known hosts although individual “Kilimanjaro Honeyguides” appeared to monitor nests of, and were chased by, Black-collared Barbets *Lybius torquatus*, suggesting that that barbet may well be a host (Short and Horne 1985).

Host list. – One known host (see below; Friedmann 1955, Short and Horne 1985, 1988, 2001; see also Vernon et al. 1990). Several species have been ascribed as hosts but these are of doubtful validity: Bennett’s Woodpecker *Campethera bennettii* (Benson and Benson 1977; but record questionable); Yellow-throated Petronia *Petronia superciliarus* (Mackworth-Praed and Grant 1970; but no evidence listed).

#### LYBIIDAE

White-eared Barbet, *Stactolaema leucotis* (possible host; see Vernon et al. 1990)

Yellow-rumped Tinkerbird *Pogoniulus bilineatus*

**Yellow-rumped Honeyguide, *Indicator xanthonotus* Blyth 1842**, The Journal of the Asiatic Society of Bengal, vol. 11, p. 116, (Darjeeling).

Distribution. – Himalayas of southern Asia.

Host list. – No known host species.

### ***Melichneutes***

*Melichneutes* Reichenow 1910, Ornithologische Monatsberichte, vol. 18, p. 160.

**Lyre-tailed Honeyguide, *Melichneutes robustus* (Bates) 1909**, Bulletin of the British Ornithologists' Club 25, p. 26, (Bitye, River Ja, Cameroons).

Distribution. – West and central Africa.

Host list. – No known host species (Short and Horne 1985). Possible hosts are likely barbets of genus *Gymnobucca* (Friedmann 1955, Short and Horne 1988).

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