**Olive-backed Sunbird**

Olive-backed sunbird is a small sized bird commonly found in many habitats, especially in urban areas[^1]. It is the most abundant sunbird in Singapore[^2]; other than Singapore, olive-backed sunbird can also be found in various areas ranging from tropical regions of Southeast China to Southeast Asia to Australia[^3]. Although olive-backed sunbird may look like a hummingbird, they are in fact not closely related, and their resemblance is due to convergent evolution[^4]. Study has shown that olive-backed sunbird is phylogenetically closer to African sunbird species than all other Asian sunbird species, suggesting that some sunbirds might have migrated to Asia from Africa historically[^5].

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**Name**

Species Name: *Nectarinia jugularis* (Linnaeus, 1766)

Synonym: *Cinnyris jugularis*, *Certhia jugularis*, *Cyrtostomus ornatus*, *Leptocoma jugularis*

Common Name: Olive-backed sunbird, Yellow-breasted sunbird, Malayan Yellow-breasted sunbird, Yellow-bellied sunbird

**Etymology**

The word “jugularis” means “pertaining to throat or neck”. It likely refers to the metallic blue-colored throat of the male bird.

**Diagnosis**

Olive-backed sunbird has olive-colored back side, grayish-brown wings and conspicuous yellow underpart[^6]. In females, other than the underpart, the yellow coloration covers the chest, throat and chin as well, while in males these parts and forehead are glossy black, iridescent with bluish-green and dark purple[^7].

In Singapore, the species that can superficially look similar to olive-backed sunbird is the plain-throated sunbird (*Anthreptes malacensis*). However, two species are rather different in size; while olive-backed sunbird is approximately 11cm in length, plain-throated sunbird is bigger, measuring approximately 14cm in length[^9]. Also, the male plain-throated sunbird has brown colored throat instead of iridescent blue-black-colored throat[^10].
Description

Adult

Adults all have olive-colored back side, grayish-brown wings and yellow colored underpart [11]. The iris is of dark to very dark brown, while the bills and feet are black-colored [12]. This species shows sexual dimorphism. In females, the chest, throat, chin are yellow colored, which is the same color with underpart, while in males these parts and forehead are glossy black, iridescent with bluish-green and dark purple sheen [13][14]. The curve on the beak of this sunbird is greater than in many other sunbird species [15]. They are capable of quick wing beat, and the flight is quick and darting [16]. Their call is a crisp “tweet tweet”, Potter (1948) mentioned that the males can produce a sharp, clear “cheew-wee tweet tweet tweet tweet tweet” song, and when the birds are flying they twitter like swallows[17].

The video above shows a male olive-backed sunbird singing. Calls of the sunbird can be found in MacAulay Library too, which belongs to Cornell Lab of Ornithology. Below is the link to one of the audio clip.
Call of olive-backed sunbird

Juveniles
Upon hatching, the hatchlings have clear orange skin without melanin pigment spots until later stage\(^{[18]}\). The juveniles first plumage is indistinguishable from that of females, and therefore they all initially look like females\(^{[19]}\). However, male juveniles slowly grow the blue throat, and they may often be seen with just a few blue feathers, or a thin blue streak down the throat\(^{[20]}\).

A young male olive-backed sunbird. Pictures are under Creative Commons Attribution-Share Alike 2.0 Generic license. The photos were taken by Dr. L. K. Yap.

**Biology**

**Habitat**

Olive-backed sunbird can be found in many habitat such as secondary forests, orchards and plantations, mangrove forest, open areas, urban areas and etc, except of denser forest such as primary forest\(^{[21][22][23]}\). Particularly common outside of forest, in gardens and around the coast\(^{[24][25]}\). The altitude which this bird is recorded is from sea level to 600m; it frequents different strata of forest including ground, understorey, midstorey and canopy\(^{[26][27][28]}\).

In presence of honeyeaters where there is competition for similar resources, olive-backed sunbird is often found outside of forest but absent in forest\(^{[29]}\).

**Feeding Habit**

Olive-backed sunbird is a generalist nectarivore\(^{[30]}\), it feed on flowers of *Bruguiera*, *Callistemon*, *Erythrina* and *Russelia* genus\(^{[31][32][33]}\). Study has shown that the flowers that olive-backed sunbirds visit are usually bilabiate or tubular in shape, and white, orange or red in color\(^{[34]}\). The birds often forage in pairs or small groups, one male and one female; they perch on the branches and turn their head upwards to obtain nectar via their bills\(^{[35][36]}\). The adults feed juveniles spiders and insects such as termites, and possibly nectar\(^{[37]}\).
Reproduction

The documented breeding season for Singapore is from January to July [38].

One study recorded that during courtship, "the male began to flutter, his wings unfolded, also fluttering rapidly. At the same time it everted its orange-yellow pectoral tufts, which consists of fine feathers extending out from under its shoulders. The male also moved from side to side, attempting to approach females and making loud calls" [39].

After copulation, females usually lay one or two eggs in one clutch [40].

Nesting and nestling care

The nest is often made low down in bushes and trees, sometimes on verandas; sometimes the birds also build nests near human’s houses such as high up in balconies, in bedrooms and etc [41]. The nest has an overhanging porch at the entrance, and the outside of the nest is made up of woven branches and plant materials, decorated with various lichens, dead leaves, seed cases, sometimes even including caterpillar fecal pellets (Figure 3) [42]. In Australia, the nests are reported that they tend to be situated towards the interior of vegetation instead of periphery, and the nest sites are typically located under canopy of trees and often suspended over water [43][44].

Female adults do most of the nestling feeding; the feeding is by regurgitation and the food is usually not carried in the bill [45]. The female transfer the food to the nestling with rapid pumping head movements [46]. Brooding is generally done at night to keep nestlings warm [47].
Both male and female sunbirds take care of the young. The photos were taken by Mr. Lawrence Neo. Permission was given by photographer to use this photo.

**Ecological services**

Olive-backed sunbird is one of the pollinator for mangrove trees such as *Bruguiera* species, and therefore can act as effective pollen dispersers\(^{48}\). In fact, study suggests that some species like *Bruguiera exaristata* is very dependent on olive-backed sunbird for pollination to the extent that the geographical distribution of the plant coincides closely with that of olive-backed sunbird\(^{49}\).

**Parasites**

Parasites such as cestode *Allohymenolepis palawanensis* and has been discovered from adult olive-backed sunbird\(^{50}\). Mites *Sternostoma tracheacolum* has been found in nasal cavity of olive-backed sunbird\(^{51}\).

**Conservation status**

According to IUCN Red list, Olive-backed sunbird is under "Least Concern" category\(^{52}\).

**Distribution**

Olive-backed sunbird has very wide distribution, including Andaman and Nicobar Islands\(^{53}\), Australia\(^{54}\)\(^{55}\), Borneo, Malaysia\(^{56}\)\(^{57}\), Burma\(^{58}\), Guadalcanal and Tulagi Islands\(^{59}\), Indonesia\(^{60}\)\(^{61}\)\(^{62}\), Papua New Guinea\(^{63}\), Philippine\(^{64}\), Solomon Islands\(^{65}\), Singapore\(^{66}\), Thailand\(^{67}\) and others.

Another map made by The Internet Bird Collection, Lynx Edition can be accessed through here:

Olive-backed sunbird distribution map

Classification

The classification of olive-backed sunbird here is according to Christidis & Boles, 2008.

Kingdom: Animalia
Phylum: Chordata
Subphylum: Vertebrata
Class: Aves
Order: Passeriformes
Family: Nectariniidae
Genus: Nectarinia
Species: Nectarinia jugularis (Linnaeus, 1766)

Taxonomy

Olive-backed sunbird was first recorded on Systema Naturae under the name "Certhia jugularis", and during that time it was placed under order "Picae", which is the Piciformes. During early 1920s to 50s the olive-backed sunbird in Singapore has been classified under genus Leptocoma, family Nectariniidae, making it Leptocoma jugularis. There were some sunbirds that had been placed under genus Cyrtostomus, and apparently many species that used to be under this genus are now classified as subspecies of olive-backed sunbird.

Currently, olive-backed sunbird is placed under order Passeriformes, family Nectariniidae (Christidis & Boles, 2008). Irwin (1999) divided the large genus Nectarinia into nine genera, in which eight of them are endemic to Africa, and this practice was followed by Fry (2000) and Cheke et al. (2001). Under this classification, the Australian and Asian olive-backed sunbird would be placed under genus Cyrtostomus, which makes the scientific name Cinnyris jugularis. However, Christidis & Boles (2008) pointed out that the mitochondrial DNA sequence studies of Bowie (2003) did not find support for classification of Irwin (1999), and therefore the species was retained as Nectarinia jugularis. In Singapore, both Nectarinia jugularis and Cinnyris jugularis are used. The summary of the various synonyms of olive-backed sunbird is provided below (Table 1).

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Validity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Certhia jugularis</td>
<td>Invalid, obsolete name</td>
</tr>
<tr>
<td>Leptocoma jugularis</td>
<td>Invalid, obsolete name</td>
</tr>
<tr>
<td>Cyrtostomus ornatus</td>
<td>Invalid, obsolete name</td>
</tr>
<tr>
<td>Cinnyris jugularis</td>
<td>Valid, junior synonym</td>
</tr>
</tbody>
</table>

Table 1: Summary of various synonyms
Subspecies info

There are currently 22 valid subspecies of olive-backed sunbird (Table 2) [82].

<table>
<thead>
<tr>
<th>Subspecies</th>
<th>Protonym</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nectarinia jugularis andamanicus (Hume, 1873)</td>
<td>Arachnechthra andamanica</td>
<td>subspecies, valid</td>
</tr>
<tr>
<td>Nectarinia jugularis aurora (Tweeddale, 1878)</td>
<td>Cyrtostomus aurora</td>
<td>subspecies, valid</td>
</tr>
<tr>
<td>Nectarinia jugularis blanfordi (Stuart Baker, 1921)</td>
<td></td>
<td>subspecies, valid</td>
</tr>
<tr>
<td>Nectarinia jugularis buruensis Hartert, E, 1910</td>
<td>Cinnyris zenobia buruensis</td>
<td>subspecies, valid</td>
</tr>
<tr>
<td>Nectarinia jugularis clementiae Lesson, 1827</td>
<td>Cinnyris clementiae</td>
<td>subspecies, valid</td>
</tr>
<tr>
<td>Nectarinia jugularis flammaxillaris (Blyth, 1845)</td>
<td>Nectarinia flammaxillaris</td>
<td>subspecies, valid</td>
</tr>
<tr>
<td>Nectarinia jugularis flavigastra (Gould, 1843)</td>
<td>Nectarinia flavigastra</td>
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</tr>
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<td>Nectarinia jugularis frenatus (Müller, S, 1843)</td>
<td>Nectarinia frenata</td>
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<td>Nectarinia jugularis idenburgi Rand, 1940</td>
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<td>Nectarinia jugularis infrenatus Hartert, E, 1903</td>
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<tr>
<td>Nectarinia jugularis keiensis Stresemann, 1913</td>
<td>Cinnyris clementiae keiensis</td>
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</tr>
<tr>
<td>Nectarinia jugularis klossi (Richmond, 1902)</td>
<td>Arachnechthra klossi</td>
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</tr>
<tr>
<td>Nectarinia jugularis meyeri Hartert, 1897</td>
<td>Cinnyris frenata meyeri</td>
<td>subspecies, usually considered invalid</td>
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<tr>
<td>Nectarinia jugularis microleuca</td>
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<td>Nectarinia jugularis obscurior Ogilvie-Grant, 1894</td>
<td>Cinnyris obscurior</td>
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</tr>
<tr>
<td>Nectarinia jugularis ornatus Lesson, 1827</td>
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<td>Nectarinia jugularis pectoralis</td>
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<tr>
<td>Nectarinia jugularis plateni (Blasius, WH, 1885)</td>
<td>Cyrtostomus frenatus plateni</td>
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<td>Nectarinia jugularis polyclystus Oberholser, 1912</td>
<td>Cinnyris ornata polyclysta</td>
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<td>Nectarinia jugularis proselius Oberholser, 1923</td>
<td>Cinnyris ornata proselia</td>
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<td>Nectarinia jugularis rhizophorae (Swinhoe, 1869)</td>
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<tr>
<td>Nectarinia jugularis robustirostris (Mees, 1964)</td>
<td>Nectarinia jugularis robustirostris</td>
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</tr>
<tr>
<td>Nectarinia jugularis tamdaensis Vo Quy, 1981</td>
<td></td>
<td>subspecies, usually considered invalid</td>
</tr>
<tr>
<td>Nectarinia jugularis teysmanni Buttkofer, 1893</td>
<td>Cinnyris teysmanni</td>
<td>subspecies, valid</td>
</tr>
<tr>
<td>Nectarinia jugularis woodi (Mearns, 1909)</td>
<td>Cyrtostomus jugularis woodi</td>
<td>subspecies, valid</td>
</tr>
</tbody>
</table>

Table 2: List of subspecies of olive-backed sunbird, with protonyms and the status.

Type specimen

In this section, the scientific name used is according to how they were named in museum, therefore in several cases genus name "Cinnyris" will be used.

The holotype of a species is the ultimate specimen that one can refer to and compare with, therefore it is important to know where the holotypes can be found.

Holotype of subspecies Nectarinia jugularis robustirostris and Nectarinia jugularis teysmanni can be found in National Museum of National History Naturalis, Leiden [83].

Holotype of subspecies Cinnyris jugularis infrenatus, Cinnyris jugularis buruensis, Cinnyris jugularis keiensis, Cinnyris jugularis idenburgi, Cinnyris jugularis frenatus and lectotype of subspecies Cinnyris jugularis plateni can be found in American Museum of Natural History [84].

In Singapore, there are 18 specimens of olive-backed sunbird in the collection of Raffles Museum of Biodiversity Research [85].
One of the olive-backed sunbird specimen in Raffles Museum of Biodiversity Research, Singapore. Photo taken by Jong Ying Wei.

Discussion area
Feel free to make any comments or ask any questions in the discussion area below.

Links to other pages and websites
Home page
Avibase Olive-backed Sunbird page
Internet bird collection: Olive-backed Sunbird
GBIF profile for Olive-backed sunbird

References for footnotes

24. ^

This page was authored by Jong Ying Wei

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