

Sympatry and Apparent Hybridisation of Golden (*Suthora verreauxi*) and Black-Throated Parrotbills (*S. nipalensis*)

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The parrotbills (family Paradoxornithidae) have long vexed avian taxonomists and systematists (ROBSON, 2007; CAI *ET AL.*, 2019) but are now widely considered to comprise a diverse group of ~38 species distributed across much of South, East and Southeast Asia (CAI *ET AL.*, 2019; BILLERMAN, 2023; AVILIST CORE TEAM, 2025). The largest genus, *Suthora*, comprises 12 species, among them Black-throated Parrotbill *S. nipalensis* and Golden Parrotbill *S. verreauxi*, both found in montane forests of South and Southeast Asia (ROBSON, 2007). Black-throated Parrotbill occurs in approximately 10 subspecies scattered through the Himalaya and Southeast Asia (south to Phetchaburi, Thailand, and the Cardamom Mountains, Cambodia); Golden Parrotbill occurs from central mainland China and Taiwan south to northernmost Vietnam and Lao PDR (ROBSON, 2007; Fig. 1).

To the best of our knowledge, Black-throated and Golden Parrotbills have never previously been recorded at the same site, although the two closely approach one another in Indochina. Black-throated Parrotbill (ssp. *beaulieui*) occurs in Phu Luang Wildlife Sanctuary in Northeast Thailand, and in Lao PDR has been recorded as far north as Xiangkhouang Province: at Phou Kabo (the type locality; RIPLEY, 1953), near Ban Keoleuk, and on Phou San (W. Duckworth *in litt.* 2025). There are also records of *beaulieui* farther south, in Nakai–Nam Theun NPA, Khammouan Province, where it is locally common (EVANS & TIMMINS, 1998; DUCKWORTH *ET AL.*, 1999); note that these records were erroneously attributed to Golden Parrotbill in EVANS & TIMMINS (1998), but were confidently identified at the time as being Black-throated—this correction is discussed in DUCKWORTH *ET AL.* (1999). Golden Parrotbill (ssp. *craddocki*) is locally common in north-western Vietnam (around Sa Pa) and in Lao PDR has been recorded as far west as Nam Ha National Biodiversity Area (TIZARD *ET AL.*, 1997) and at Nam Et–Phou Louey National Park (DAVIDSON, 1998). Given the close occurrence of the two species in northern Lao PDR (Fig. 1), they might reasonably be expected to co-occur.

Observations.—On a visit to Nam Et–Phou Louey National Park (NEPL), Louangphabang Province, Lao PDR, in March 2024, we encountered a flock of *Suthora* parrotbills in montane epiphytic forest at *c.* 1,920 m (approximately 20°17'02.4"N, 103°10'58.8"E). In the flock were two pure-looking Golden Parrotbills, three or four Black-throated Parrotbills, and at least two birds that showed plumage characteristics intermediate between the two species.

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Received 25 March 2026; accepted 30 April 2026.

The pair of pure-looking Golden Parrotbills were identified by virtue of their bright yellow-orange ear-coverts concolourous with the nape and mantle, small black bib mottled white and white supercilium with only a few dark feathers above it (Fig. 2A–B). Our photos of this pair match images of Golden Parrotbills photographed around Sa Pa in Vietnam ($n = 37$ photos in Macaulay Library, to December 2025). Both birds were actively gathering moss for nest-building (Fig. 2B).

Birds we observed resembling pure Black-throated Parrotbills showed features consistent with taxon *beaulieui*. These individuals were identified by virtue of their extensive jet-black ear-coverts, more extensive black bibs and throats and broad black stripes above the white supercilia. The crowns were more richly coloured, and obviously more vivid than the duller mantle. None of these birds was photographed but were identical to birds AJB observed and photographed in Phu Luang, Thailand, two years prior (Fig. 2C).

At least two parrotbills (but feasibly more) appeared to be intermediate between Black-throated and Golden Parrotbills and, in our view, were very likely to be hybrids (see Discussion). One bird had plumage similar to typical Golden Parrotbill, but the ear-coverts were greyish-brown (contrasting with the orange nape) and there was a much broader dark grey smudge above the supercilia (Fig. 2D); another bird had blackish-grey ear-coverts (closer in colour to Black-throated, but very obviously not as dark) and a broader, darker black line above the white supercilia (Fig. 2E).

Discussion.—Our observations are notable for two reasons. First, to the best of our knowledge, these observations constitute the first documentation of apparent hybridisation between Black-throated and Golden Parrotbills. Proving hybridisation between two species is challenging in the absence of detailed genetic analysis. However, such circumstances can often be confidently inferred from morphological intermediacy (WILSON, 1992, ESTABROOK *ET AL.*, 1996). In this instance, that at least two parrotbills had plumage obviously intermediate between Black-throated and Golden Parrotbills, and were found syntopically with both likely parent species, renders hybridisation much the most likely explanation. All parrotbills we observed looked like adults and we therefore find it extremely unlikely that our aberrantly plumaged birds were immature. Second, our observations represent the first documented breeding behaviour (nest-building) of Golden Parrotbill outside of Taiwan (ROBSON, 2023). In Taiwan, pairs of Golden Parrotbill have been observed constructing an egg-shaped nest made of green moss (ROBSON, 2023), the same material we observed the pair of pure-looking birds collecting.

We are aware of only one other parrotbill species-pair known to hybridise. Hybridisation between Vinous-throated *S. webbiana* and Ashy-throated Parrotbills *S. alphonsiana* has been recorded in narrow areas of sympatry in Sichuan (China) and Sa Pa (West Tonkin, Vietnam) (ROBSON, 2007; CROTTINI *ET AL.*, 2010), as well as in Lombardy, Italy, where both species have alien populations (BOTO, 2009). Notably, Vinous-throated, Ashy-throated, Black-throated, and Golden Parrotbills are all in the genus *Suthora*, and hybridisation events have occurred in pairs of taxa that are very closely related (CROTTINI *ET AL.*, 2010; YEUNG *ET AL.*, 2011). Hybridisation has also been reported between other Black-throated Parrotbill taxa, including between ssp. *humii* and *poliotis* (ROBSON, 2007), each of which has been advocated for species rank (ROBSON [2007] and PENHALLURICK & ROBSON [2009] [see below]).

The taxonomy of Golden and Black-throated Parrotbills remains contentious among taxonomists and is almost certainly in need of future revision. Black-throated and Golden

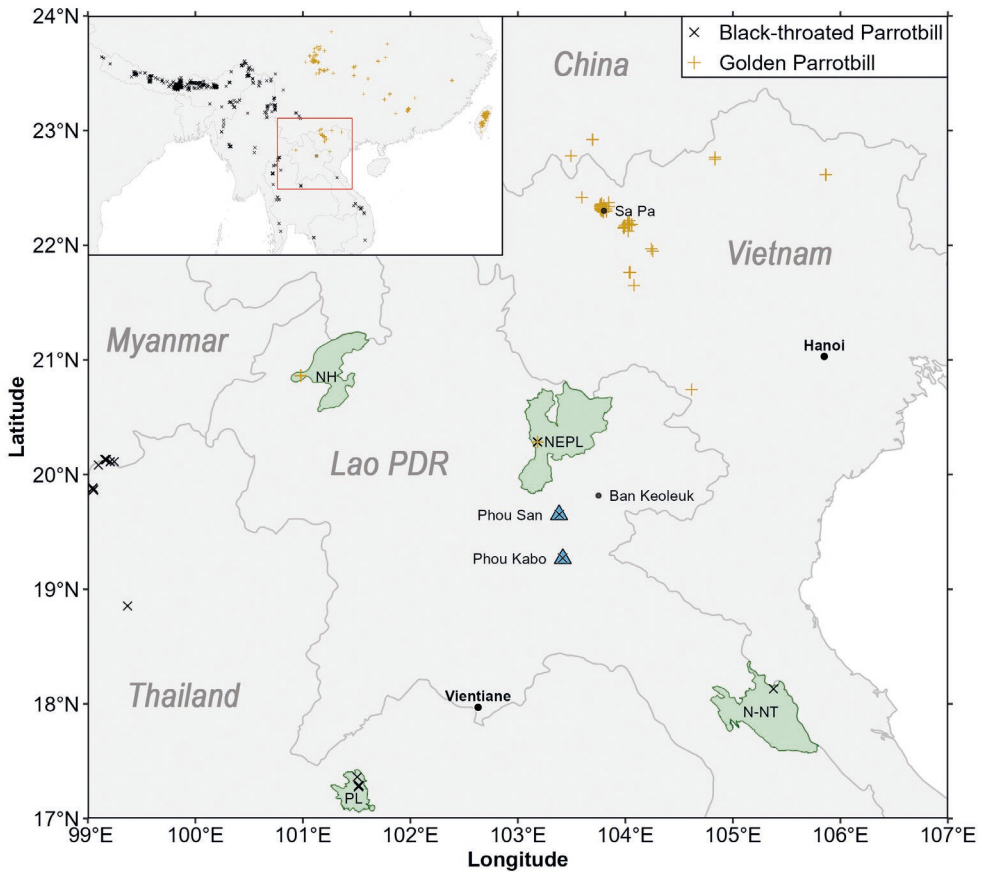


Figure 1. eBird records (to December 2025) of Black-throated (*Suthora nipalensis*) and Golden Parrotbills (*S. verreauxi*) across northern Indochina (main figure), and their entire ranges (inset). Notable sites mentioned in-text are labelled within the main figure, including protected areas (green shaded regions) of Nam Et–Phou Loey National Park (NEPL), Nakai–Nam Theun National Park (N-NT), Nam Ha National Protected Area (NH), and Phu Luang Wildlife Sanctuary (PL). Additional records not shown in eBird but mentioned in text are shown from Phou San, Phou Kabo and Ban Keoleuk, while two eBird records of Golden Parrotbill from north-western Yunnan, China, were excluded as unsupported and likely erroneous.

Parrotbills were historically treated as conspecific (e.g. DEIGNAN & RIPLEY, 1964; INSKIPP *ET AL.*, 1996) but on account of the two being “very distinct morphologically” (ROBSON, 2007) have in most treatises and checklists of the past 75 years each been afforded species rank (e.g. VAURIE, 1954; DICKINSON, 2003; ROBSON, 2007; AVILIST CORE TEAM, 2025). ROBSON (2007) commented that the ten taxa currently lumped in Black-throated Parrotbill ‘may represent more than one species’ and suggested how they might in the future be divided into five morphologically rather distinct species. This was explicitly endorsed by PENHALLURICK &

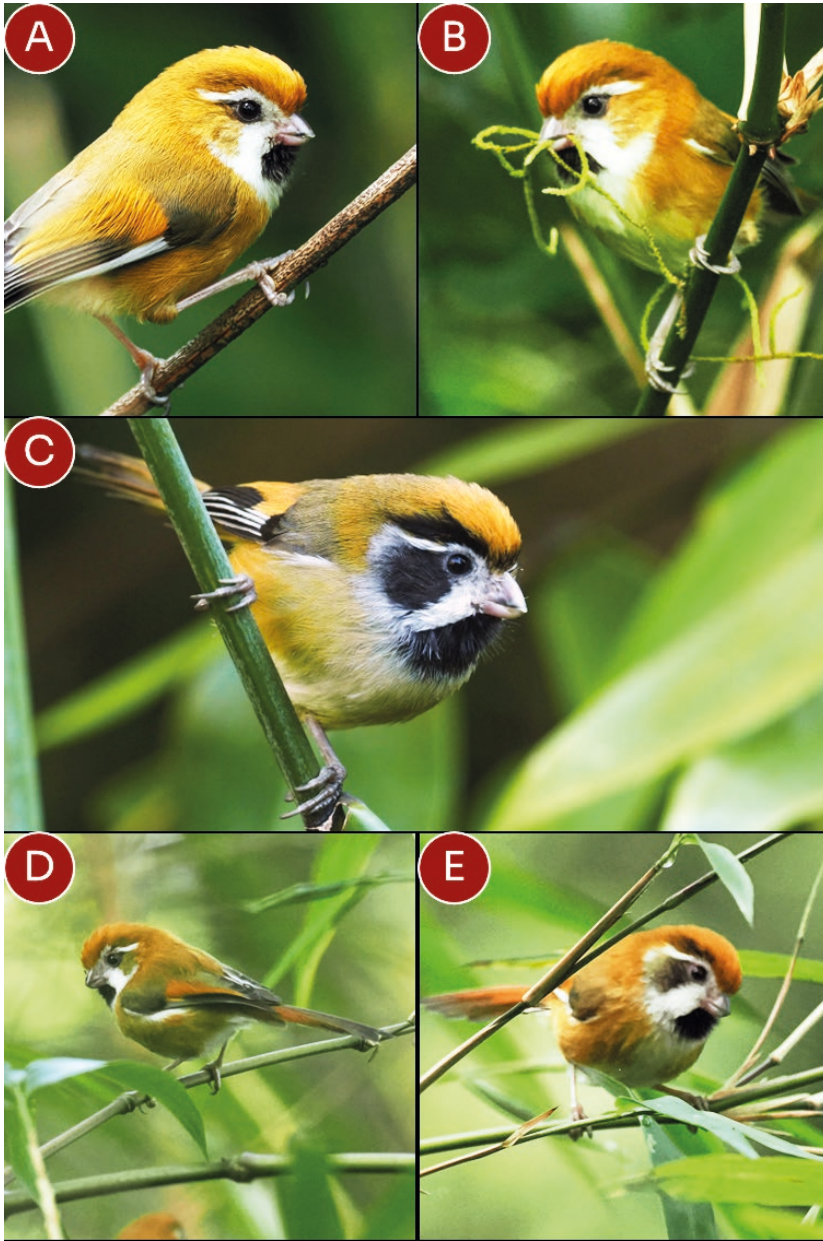


Figure 2. Photographs of *Suthora* parrotbills including: (A–B) pure-looking Golden Parrotbills *S. verreauxi craddocki* from Nam Et–Phou Louey National Park (NEPL NP), Lao PDR in 2024 observed collecting nesting material; (C) a Black-throated Parrotbill (*S. nipalensis beaulieui*) from Phu Luang, Thailand in 2022, showing plumage consistent with pure-looking individuals observed in this study from NEPL NP in 2024; and (D–E) phenotypically intermediate and likely hybrid individuals, showing off blackish-gray ear-coverts and smudged grey/black lines above the supercilia from NEPL NP in 2024. All photographs by Alex Berryman.

ROBSON (2009) who, in their review of generic limits in parrotbills, accepted the five-species treatment. However, this suggestion has not achieved more widespread support, despite YEUNG *ET AL.* (2011) finding that Black-throated and Golden Parrotbills are probably paraphyletic. The consideration of hybrids in species delimitation has been widely discussed in the literature (e.g. GILL, 1990, 2014). Our finding of apparent hybridisation between Golden and Black-throated Parrotbills does not preclude their recognition as independent species; indeed, the existence of narrow, stable hybrid zones often indicates reproductive incompatibility (e.g. HELBIG *ET AL.*, 2002; TOBIAS *ET AL.*, 2010). Further evidence is needed to genetically confirm hybridisation, and to determine whether our observations of apparent hybrids reflect only an occasional occurrence, or the existence of a consistent hybrid zone between the two species.

Acknowledgements.—We thank the entire team at WCS Lao PDR, and our porters and guides, who facilitated our visit to Nam Et–Phou Louey National Park. Will Duckworth kindly provided information on records of both species in Lao PDR. We thank two anonymous reviewers for their helpful edits.

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