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The Pallas's Leaf Warbler *Phylloscopus proregulus* from Ladakh, India: An addition to the South Asian avifauna

Padma Gyalpo, Tashi Angchok Stanba, Stanzin Chamba, Rigzin Norboo, Mudassir Ahmad Mir, Ali Akbar, Stanzin Yountan & Mirza Hussain

Gyalpo, P., Stanba, T. A., Chamba, S., Norboo, R., Mir, M. A., Akbar, A., Yountan, S., & Hussain, M., 2023. The Pallas's Leaf Warbler *Phylloscopus proregulus* from Ladakh, India: An addition to the South Asian avifauna. *Indian BIRDS* 19 (3): 78–81.

Padma Gyalpo, Shey Choldan House, Leh, 194101, Union Territory of Ladakh, India. E-mail: gyalpo4086@gmail.com. [PG] [Corresponding Author]

Tashi Angchok Stanba, Norbulinga Chubi, Leh, 194101, Union Territory of Ladakh, India E-mail: tashiangchok1@gmail.com. [TAS]

Stanzin Chamba, Sumoor Nubra, Leh, 194101, Union Territory of Ladakh, India. E-mail: stanzinnubra44@gmail.com. [SC]

Rigzin Norboo, Taksha, Spango, Nubra, Leh, 194101, Union Territory of Ladakh, India. E-mail: ladakhrigzinnubu0108@gmail.com. [RN]

Mudassir Ahmad Mir, Mir Malik pa Turtuk, Union Territory of Ladakh, India. E-mail: muddassirahmad1997@gmail.com. [MAM]

Ali Akbar, Tiasuru, Kargil, 194103, Union Territory of Ladakh, India. E-mail: aakkbbaarr279@gmail.com. [AA]

Stanzin Yountan, Takkul Karsha, Zanskar, Kargil, 194103, Union Territory of Ladakh, India. E-mail: stanzinyountan123@gmail.com. [SY]

Mirza Hussain, Thilla Broq Khandi, Kargil, 194103, Union Territory of Ladakh, India. E-mail: mirzaghali@gdck@gmail.com. [MH]

Manuscript received on 08 June 2023.

The Pallas's Leaf Warbler *Phylloscopus proregulus* is a small, short-tailed, and an extremely active warbler with a rather well-marked plumage. Once a part of a larger species complex that included the regionally breeding Lemon-rumped Warbler *P. chloronotus* amongst others, distinct vocalisations supported by moderate morphological differences has resulted in this complex being split into five species (Martens et al. 2004). Apart from the Lemon-rumped Warbler, other species in the complex like the Sichuan Leaf Warbler *P. forresti* and the Chinese Leaf Warbler *P. yunnanensis* are winter visitors to northeastern

India. The fourth, the Gansu Leaf Warbler *P. kansuensis*, is only found in China. Post split, the monotypic Pallas's Leaf Warbler breeds in the coniferous and mixed forests in the Siberian Taiga and winters in a wide range of forested and semi-wooded habitats in eastern Asia. Here, we document the first instance of a Pallas's Leaf Warbler for South Asia based on photographic records from Hanle village (32.47°N 78.58°E) in eastern Ladakh.

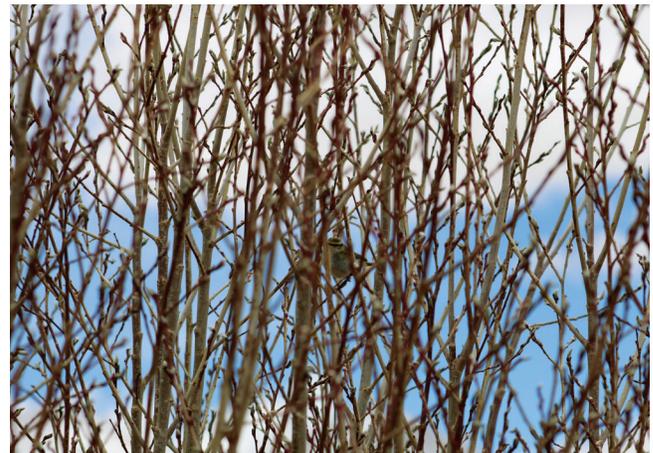
Observations

25 May 2023: During a trip to Hanle, at 1309 h, MAM saw a



Both: Mudassir Ahmad Mir

123. Putative Pallas's Leaf Warbler showing distinct yellow in fore-supercilium and white bars on wing-coverts.



124. The leaf warbler moving through the Salix trees.

bird actively moving among the twigs of a small *Salix* tree at a height of c.3 m. Though it was identified as a warbler, he could not ascertain the species. It proved difficult to capture a photo as it was actively foraging among the branches. MAM and AA started photographing the bird while SY and MH kept an eye. Much time could not be spent because they were in a rush to head back to Leh and hence photographs obtained were just average [123, 124]. When they were posted the images in 'Ask IDS of Indian Birds' forum on Facebook, the members there identified it as a probable Pallas's Leaf Warbler (Ahmad et al. 2023).

29 May 2023: On 27 May, PG forwarded MAM's images to Ashwin Viswanathan who insisted on getting a better photograph and a call recording to confidently establish the ID. After much consideration, PG, SC, and RN visited Hanle to renew a search to find the warbler.

On 29 May at 0600 h, we searched for the warbler at the same spot but failed to spot any. Only a few Greenish Warblers

P. trochiloides were foraging in the *Salix* trees. At 1500 h, TAS joined the team and we started searching the *Salix* tree plantation behind the Naga Hamlet, often referred to as Naga Bagh. This site is c.60 m from the initial spot. The trees here were at a height of c.1-3 m and their leaves were still at the bud stage. After an hour of search, we located a warbler flitting from tree to tree. After obtaining a few decent photographs [125–131] of the supposed Pallas's Leaf Warbler, we were ready with our phones to record any vocalisations. Unfortunately, the warbler did not make any calls during our observation period.

The images showed a strongly marked leaf warbler with rich yellow supercilium that gradually faded into pale yellow behind the eye, when then turned pure white at the rear end [125, 126]. It had a dark green crown with a pale median stripe that turned yellowish towards the bill [127]. The dark eye-stripe under the supercilium had a hook towards the rear [126, 129]. Its back was green with two whitish wing-bars, the



125. Pallas's Leaf Warbler showing hooked eye-stripe and strong yellow anterior supercilium.



126. Pallas's Leaf Warbler showing hooked eye-stripe and two toned supercilium with yellow nearly reaching forehead.



127. Pallas's Leaf Warbler showing lateral crown stripe with suffused yellow anterior section and mottled cheeks.



128. Pallas's Leaf Warbler showing pale rump band.

Rigzin Nurboo

Both: Padma Gyalpo



129. Pallas's Leaf Warbler showing hooked eye-stripe and two-toned supercilium.



130. Pallas's Leaf Warbler showing pale rump and yellow forehead.



131. Pallas's Leaf Warbler showing strong yellow anterior supercilium turning white behind the eye.

Alli: Padma Gyaplo

bar on the greater coverts being much broader than the other [127, 129]. In flight, the rump was distinctly pale yellow [128]. Underparts were whitish while the bill and the legs were dark [130, 131]. Its cheeks had some yellowish mottling [131]. The short tail had a notch, and the undertail coverts were also white [131]. After reaching home, PG transmitted the images to eBird India Editors WhatsApp group wherein opinions were mixed—some agreeing with the ID as a Pallas' Leaf Warbler while

others expressed reservations that it could be Lemon-rumped Warbler.

Identification

The images obtained on the first day were blurry and were hard to place confidentially to a species. However, the images on the second day provided straightforward ways to eliminate many other *Phylloscopus* sp. including the expected species like the

Yellow-browed Warbler *P. inornatus* and the Hume's Warbler *P. humei*. The distinct pale rump [128] is a feature that supports only the Ashy-throated- *P. maculipennis* and the Buff-barred Warbler *P. pulcher* apart from the birds that belong to the Pallas's Leaf/Lemon-rumped Warbler complex. The hooked eye-stripe [125, 131] eliminates the former two, leaving only the remaining leaf warblers in the Pallas's Leaf Warbler complex to consider. All remaining species look very similar and we did not have a sound recording to support our identification; hence some detailed plumage analysis was required to confirm its ID.

Among the five Warblers of the Pallas's Leaf Warbler complex, all four Sino-Himalayan species are very similar and they differ from Pallas's Leaf Warbler in very similar ways. Hence, we are only discussing the separation from the Lemon-rumped Warbler, the most likely confusion species in this region. By extension, all these points on morphology are also valid for other three species in this complex. Our bird has an intense yellow supercilium in front of the eye that fades towards the rear [131]. While certain well-marked Lemon-rumped can show a yellow-suffused anterior supercilium, it is never this yellow and does not contrast strongly with the rear. The amount of yellow tinge on the lateral crown stripe becoming whiter towards the nape, contrasting with the dark crown [128] as well as dark, mottled ear coverts [131] is also consistent with Pallas's Leaf Warbler and not a Lemon-rumped Warbler. As expressed by some of the referees, the typical Pallas's Leaf Warbler that occurs in Europe in fresh plumage is even more strongly marked and hence there were certain reservations initially to accept this as one. However, as commented to us privately through Praveen J, Paul Leader indicated that this is a worn Pallas's Leaf Warbler (Paul Leader, pers. comm. 31 May 2023), of late winter/early spring, and it appears this variation in its plumage is not usually appreciated in western Europe. While vocalisations would have helped, calls are seldom heard in spring, and vagrant leaf warblers usually remain silent (Shirihai & Svensson 2018). In summary, a combination of morphological features confirms our bird on the second day as a Pallas's Leaf Warbler, while the bird of the first day was most likely the same individual.

Discussion

Most migrating birds that breed in the Holarctic region travel long distances to wintering areas and can occasionally turn up as vagrants outside their regular range. Local climate can play a role in trapping or disorienting migrating passerines. From 23–27 May, the weather was generally cloudy in Ladakh region; it snowed in few parts while the lower altitudinal areas received copious rainfall. Ladakh has been documented as a well-known route for passerine migration. Conspicuous visible migration almost invariably occurs during periods of low cloud when migrants that are brought down by low cloud or rain often stayed in the valley bottom for a few days, even after the weather cleared (Delany et al. 2017). We assume that such similar weather conditions might have also led to the occurrence of Pallas's Leaf Warbler between 25–29 May.

Though the species usually winters in southern parts of eastern Asia, it visits western Europe every autumn, often in some numbers, indicating that they have now established an alternative wintering strategy in that part of the world (Shirihai & Svensson 2018, Alström et al. 2020). It is quite possible that our bird might have been migrating to Siberia from Europe to breed, or alternatively, though less likely, it could be a stray individual from the eastern population. The fact that it has occurred in Iran (Gol et al. 2014), including two recent records in March (Jabbari 2023) and April (Mahdavi 2023) this year, along with our May record in Ladakh, supports our first hypothesis.

Refined methods in systematics and phylogeny have shown that many *Phylloscopus* species, although poorly differentiated in external morphology, are often subdivided into distinct allopatric populations which differ in acoustic and molecular-genetic characters. Most of these birds are migratory and are often uniformly distributed over large geographic areas (Martens et al. 2004). Such morphologies of *Phylloscopus* sp. renders them tough to identify in the field especially during spring season when plumages are abraded and they don't vocalise. Extra care must be exercised while documenting such vagrants.

Pallas's Leaf Warbler has not been included in the list of birds found in South Asia (Praveen et al. 2023). Hence, our records will be the first for this species in this region, as well as for India.

Acknowledgement

We are extremely thankful to all the five referees who gave their valuable inputs on ID without which this manuscript would have been incomplete. Thanks to Praveen J, Ashwin Vishwanathan, and members of eBird India Editors Whatsapp group for their inputs and to Paul Leader for commenting on the ID from our photographs.

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