ON THE APPARENT OCCURRENCE OF HOSE'S SURILI *Presbytis hosei* IN SIMILAJAU NATIONAL PARK, SARAWAK, MALAYSIA

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ABSTRACT

The polytypic Hose's Surili *Presbytis hosei*, endemic to Borneo, is categorised as Vulnerable by the IUCN Red List of Threatened Species. Mostly, recent sources recognise *P. h. everetti* (previously considered a junior synonym of *P. h. hosei*), leaving the nominotypical subspecies with only a small known range within which no surviving populations are confirmed. Similajau National Park, coastal Sarawak, has been speculated to hold *P. h. hosei* (*sensu stricto*). If *P. hosei* occurs there, it must be rare: the most intensive survey to date (1995) failed to locate it. Descriptions of apparent *P. hosei* observed in the park in 1986, 2002 and 2005 (once in each year) do not fully accord with those of *P. h. hosei*, *P. h. everetti*, any other named form, or with one another. These animals cannot confidently be identified. Some surilis in the park might be subspecifically intermediate between Sarawak Surili *P. chrysomelas chrysomelas* (the most common colobine in the park) and *P. c. cruciger*. Whatever they are, if still extant in the park they are probably extremely threatened there. The lack of a healthy (if any) population in Similajau National Park of *P. h. hosei* (*s.s.*), which is so poorly known that its typical morphology is partly inferred, means that searches for it are urgently required in Brunei.

Keywords: conservation status, geographic range, *Presbytis chrysomelas*, *Presbytis hosei hosei*, taxonomic uncertainty

INTRODUCTION

Categorised as Vulnerable by the *IUCN Red List of Threatened Species* (Nijman *et al.*, 2008a), Hose's Surili (= Hose's Langur, Grey Leaf Monkey) *Presbytis hosei* (Thomas) is one of several primate species endemic to Borneo. Recent authors have not followed Brandon-Jones (1997) in considering it conspecific with Javan Surili *P. comata* Desmarest. It is invariably considered polytypic, and Groves (2001) suspected that it might best be divided into three species, a stance supported by subsequent craniometric analysis (Meijaard & Groves, 2004), and followed by Nijman (2010). Brandon-Jones (1997), Groves (2001, 2005) and Brandon-Jones *et al*. (2004) recognised *P. h. everetti* (Thomas), although previous authors in recent decades (notably Payne *et al*. [1985]: the chief reference used during the surveys providing the observations described here) had invariably treated it as a synonym of *P. h. hosei* (Thomas) as did the later Nijman (2010), although without discussing why. Brandon-Jones (1997) noted that the subspecies *P. h. everetti*, from inland eastern Sarawak, Brunei, west Sabah and northern Kalimantan, is undoubtedly sexually dichromatic, while the nominotypical subspecies *P. h. hosei* (as he defined it, confirmed only from the type locality of Niah, Sarawak) is reputedly sexually monochromatic. Brandon-Jones (1997, 2006) knew of no records of *P. h. hosei* (*sensu stricto*) for decades, speculating that it might be extinct but that, if it survives, Similajau National Park (= NP) in Sarawak, and Brunei might be the most likely places, on geographical grounds, to find it.

This note therefore details records of apparent *P. hosei* from Similajau NP. This park (N3°22-31', E113°10-18') covers 90 km² of forest along the Sarawak coast, mostly as a narrow strip, and c. 131 km² of adjacent sea. In 1986 it was contiguous with thousands of square kilometres of little-degraded lowland evergreen

forest. By 1995 it had been largely isolated through logging, and by 2005 it was almost entirely surrounded by oil palm plantation and had in parts itself been heavily logged. Much of the park is mixed dipterocarp forest, transitional with *kerangas* (forest on soil too poor to support a rice crop) over large areas, particularly closer to the coast. Some areas, both tidal and freshwater, resemble swamp forest. Most of the park is below 50 m altitude, and much is on almost level terrain; the highest point is at only 113 m. The records came from general bird and large mammal surveys, using mainly direct observation, of the park in 1986 (6 August - 16 September; Duckworth & Kelsh, 1988; Duckworth, 1995), 1995 (4-28 September; Duckworth, 1997), 2002 (9-17 July; Jefferies & Sebastian, 2003) and 2005 (unpublished observation of JWD during 5-27 April). Throughout the text, comparison is made to the various figures in Payne *et al*. (1985) of colobines, not assuming that they are perfectly accurate, but to act as a point of reference for precision in describing the observed animals' appearance. While comparison of the observations against particular specimens would be preferable, these pictures were available to all observers during the surveys. All pertinent morphological

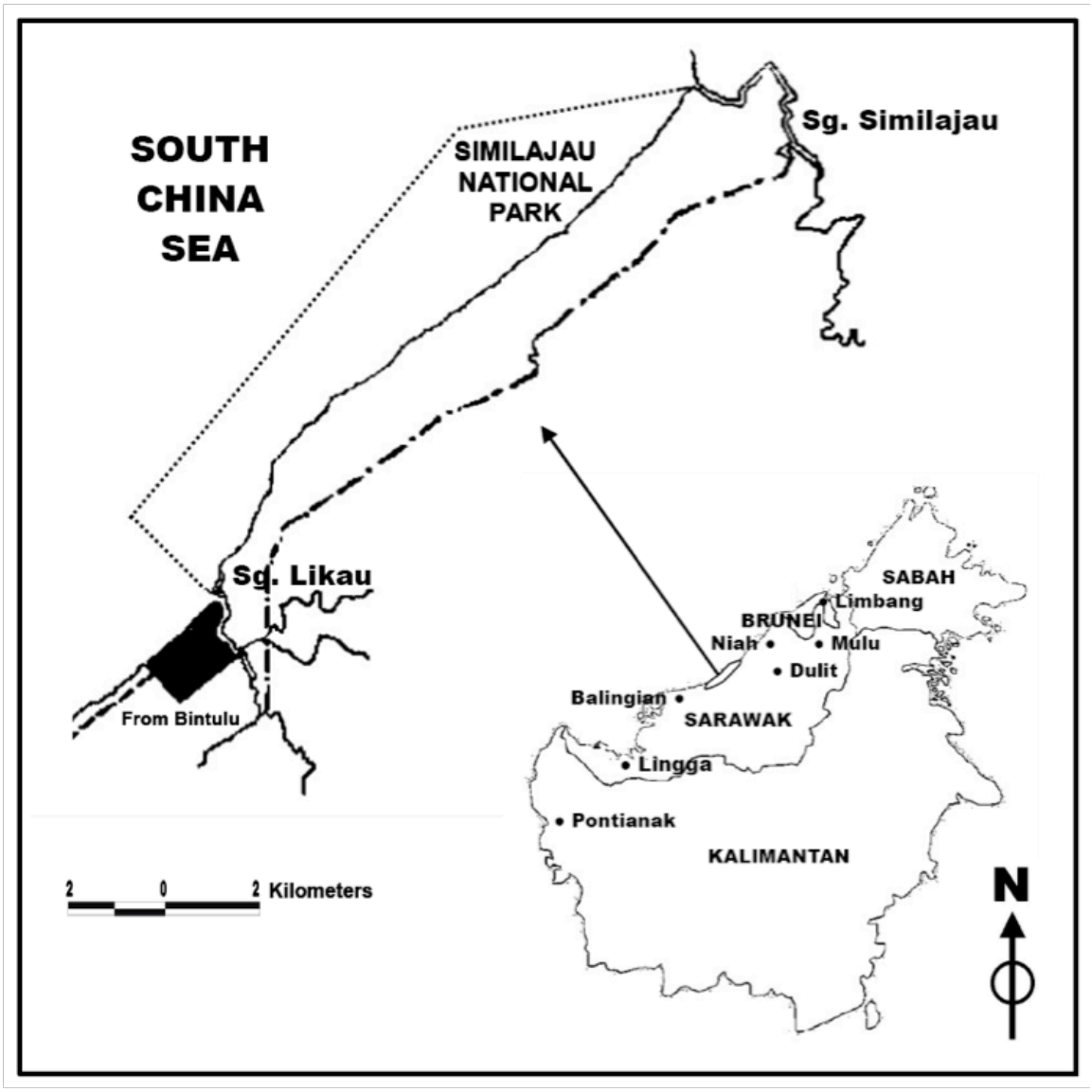

Fig. 1. Similajau National Park, and other Bornean localities mentioned in the text. Sg. = Sungai (River). The black area southwest of the Sungai Likau is a recent extension to the park, the original southern boundary of which was the Sungai Likau. The seaward boundary of the park is shown by the dotted line and the landward by the dashed line.

information from each sighting is given here; that it is rather scanty reflects the brevity of the views and, in 1986, the community-level novelty of the entire Southeast Asian fauna to the surveyors. The taxonomy of Southeast Asian colobines is unstable, particularly for Bornean surilis. Taxonomy and nomenclature here follow Groves (2001). The park and other Bornean localities mentioned in the text are shown in Fig. 1.

These surveys showed the common colobine of the park's forests to be Sarawak Surili *P. chrysomelas chrysomelas* (Müller) (called Banded Langur *P. melalophos chrysomelas* by Payne *et al*. [1985], and *P. femoralis chrysomelas* by Brandon-Jones *et al*. [2004]), itself of major conservation significance: the taxon is presently considered Critically Endangered by the IUCN Red List of Threatened Species (Nijman *et al*., 2008b). Although Medway (1977: 66) stated that "northwards *P. m. chrysomelas* extends to central Sarawak where it meets *P. m. cruciger*", Payne *et al*. (1985) omitted from their distribution map records of *P. c. chrysomelas* from Balingian (Pocock, 1935: 909-911) and Similajau NP (Aken, 1982). *Presbytis chrysomelas* was observed many times (involving several groups at two sites) in 1986 (Duckworth & Kelsh, 1988), on ten days (involving at least five groups at three sites) in 1995 (Duckworth, 1997), more regularly and at more spots than any other colobine in 2002 (ACS), and four times in 2005 (with four further sightings of colobines unresolved to species; JWD). In 1995, 2002 and 2005, the animals were studied particularly carefully because of an inconclusive 1986 sighting of *P. hosei* in the park. Most sightings in all years were of animals typical of *P. chrysomelas chrysomelas*.

OBSERVATIONS OF APPARENT *P. hosei* IN SIMILAJAU NATIONAL PARK

During the late afternoon of 24 April 2005, JWD observed a troop of six or more surilis for about a minute about 1 km inland along the Batu Ancau trail, in the south of the park. It contained animals differing greatly from typical *P. c. chrysomelas*. Only two individuals were seen well; they had bright pink facial skin with bold black (or blackish) bands across the cheek-skin (similar in size and oblique orientation to those in the illustrations of *P. hosei* in Payne *et al*. [1985]), dark (but not charcoal) grey upperparts, and strikingly bright clean white-looking underparts. The facial skin colour-pattern and ventral pelage colour were both well outside the range of variation shown by other surilis seen in the park in 2005. The best-seen individual was much smaller than adult size (but showed no trace of infant colour). The same facial skin colour-pattern and ventral pelage colour features were confirmed on at least one full-grown animal. Four or more other animals in association were seen in quick succession as the troop moved. In the brief views obtained, none appeared inconsistent with the two clearly visible individuals, having upperparts paler than those of *P. chrysomelas*, (Müller) and at least some white on the underparts. Field notes focused on facial skin and ventral features as these differed noticeably from those of local *P. chrysomelas*. Had the extensive white head pelage of *P. h. hosei* and *P. h. everetti* (Payne *et al*., 1985 [where *P. h. everetti* was considered a synonym of *P. h. hosei*]; Brandon-Jones, 1997) been present, this marked difference from local *P. chrysomelas* would have been noted. The head pelage was presumably of a grey tone like that of the upperparts, or at most resembled in pallor the illustration in Payne *et al*. (1985) of *P. h. sabana*.

These animals were about 50 yards from a first-detected group of surilis on which observation (unfortunately) concentrated. On being flushed, the two groups moved off in opposite directions. One of the first-seen group had fleshy grey facial skin with readily visible, dark, horizontal cheek-bars, charcoal pelage and dirty-looking pale grey-white underparts. At least one other had the dark face typical of *P. chrysomelas* in the park. This and several others had dark pelage resembling that of *P. chrysomelas* in the park. An uncertainly identified animal seen along the park's 'Loop Trail' (starting from the Sungai Likau) on 11 April 2005 had blackish pelage with a whitish blaze across the chest as well as between the hindlegs and around the tail-base, and obvious dark cheek-bands. Much of its facial skin looked pink, but the precise tone was difficult to judge because the observation was against the light.

On 9 July 2002, ACS watched two apparent *P. hosei* for 10 minutes along the Loop Trail. They were in the tall larger-boled forests on the hilly part of the park, towards the inland boundary. Clean white cheek fur was seen clearly on one individual. The second animal faced away from the observer but even from almost directly behind, white cheeks could be seen puffed out on either side of the head. Clean white on the cheeks extended up the sides of the head, but not to the extent that is depicted for *P. h. hosei* (including *P. h. everetti*) in Payne *et al*. (1985). The extent (although not the colour) of white on the head of the individual best observed was more like that source's illustration of the pale area in *P. h. sabana* than of white in *P. h. hosei*. Black 'war-paint' bands on the face were clearly observed on the head-on individual. When first observed in the canopy, it was the pale-faced appearance that

first caught ACS's eye: the pink skin was very bright. The dark pelage (which was paler ventrally than dorsally) was clearly a lighter shade of grey than the charcoal-colour of *P. chrysomelas*.

In 1986, a group of six apparent *P. hosei* was seen in intergrade *kerangas*-mixed dipterocarp forest near the Sungai (= River) Similajau (the northern boundary of the park), and other sightings of less visible animals elsewhere in the park in that year may also have been of this species (Duckworth & Kelsh, 1988). On 10 September, RNK observed the animals head-on at ranges down to 40 m. The face was pale pinkish-white with oblique black bands across the cheeks. The head-fur was greyish, like the illustration of *P. h. sabana* (Thomas) in Payne *et al*. (1985). The underparts were whitish, as were the insides of the limbs and, probably, the base of the tail. The 'machine-gun' call resembled that of *P. chrysomelas*. It was not noted how many animals showed well enough to allow these characters to be assessed, and it cannot be ruled out that there might have been variation in, for example, head pelage.

On the 1995 survey, no animals strongly suggesting *P. hosei* were seen. The only animal with its face visible in a surili troop near the Sungai Likau (in the south of the park) had some ill-defined flesh-pink skin on the face (eyelids, bridge of nose and cheek-skin immediately beside the nose) (R.J. Wilkinson *in litt*., 1995). Surilis seen around the Sungai Likau that year also varied in pelage darkness, particularly on the tail. Some animals in one troop had almost black tails, while others had so many pale hairs that from a distance the tail seemed almost white. This is probably within the range of the taxon's natural variation: one paratype of *P. chrysomelas* collected by P.-M. Diard and labelled as from near Pontianak is predominantly albinistic (Brandon-Jones, 1999). Mitchell (1977) reported that in Gunung (= Mount) Mulu NP, *P. hosei* often has white flecks on its tail; one had a 100-mm white tail-tip.

DISCUSSION

Sarawak Museum male (probably adult, but skull not traced) 086/28 is the only known study specimen of the Similajau area *P. c. chrysomelas* population, albeit somewhat paler ventrally than were most of those observed in the field during 1986-2005. Collected (number B.2) on 22 January 1953, apparently by 'Nyandoh', its label is printed: 'Loke Wan Tho: Tom Harrisson Collection'. Its field notes state: "old jungle; on top of a tree; pairs". The hair behind the facial midline has a V-shaped parting. The occipital crest is about 50 mm in length; the nuchal hairs are mainly backwardly compressed. The groin, lower abdomen, inside of the limbs, underside of the tail almost to its tip, midline of the lower chest (almost coalescing with the abdomen), most of the mammary area, and a patch below the chin are yellowish white. The upper chest and sides of the neck are pale brown. Intermediate in tone between these colours, the lips, especially the upper one, are sprinkled with blackish hairs. The dorsal tail base is brown, as are the lower chest (other than its midline) and upper abdomen, darkening laterally and towards the abdominal midline. The pelage is otherwise blackish brown (DB-J).

Before concluding that another surili taxon occurs at Similajau NP, allowance must be made for the extensive variation in *Presbytis chrysomelas*, as discussed in Napier (1985: 41) and Groves (2001: 278). Some otherwise morphologically typical Similajau NP *P. chrysomelas* showed atypical features, notably grey to pinkish facial skin (producing contrasting dark cheek bands [although their orientation was not noted]) and paler underparts. Pocock (1935: 911) found marked tonal variation in the grey throat colour of two specimens from Balingian (N2°55', E112°32'), 100 km southwest of Similajau NP. In the Sarawak Museum, Banks (1931: 105) had "a peculiar male from Lingga [N1°21', E111°10'] (No. 5.216) [now accessed as SMK.086/21] in which the bases of the hairs instead of being black or blackish brown are rust coloured on the shoulders, down to the elbows, and on the thighs and flanks so that only the extremities of the hairs are black. If turned aside they disclose rust coloured markings faintly suggestive of what is presently generally called *P. chrysomelas cruciger* (Thomas); the hairs on the rump have only a little rust colour just at the base and there are few of these. The tail is dark brown at the base and more grizzled brownish at the extremity; the crest is very well marked but yellowish white in front with a white patch behind each ear".

Those surilis seen in Similajau NP in 1986, 2002 and 2005 and described above were even more strikingly different from typical *P. c. chrysomelas*. In sum, from the descriptions above: all had bright pale pink facial skin with well-defined oblique dark cheek bands; where specified (in 2002 and 2005), the upperparts were paler grey than *P. c. chrysomelas*; and (1986 and 2005, unconfirmed in 2002) the underparts were considerably whiter. Compared with external variation in museum series of surilis, the unusual ones were consistent enough on the three different occasions to comprise probably only one odd form. Only the animals seen in 2002 displayed the clean white cheek

pelage, restricted in *P. hosei* to *P. h. hosei* and *P. h. everetti*. Animals in 1986 were explicitly noted to have grey sides to the head (resembling *P. h. sabana*).

The combination of grey (as described in 2002 and 2005), rather than charcoal-grey, upperparts with whitish underparts fits only *P. hosei*. *Presbytis hosei* occurs across a wide altitudinal range including in lowland forest (Nijman, 2010), and Similajau NP is only 60 km southwest of Niah (N3°52', E113°44'), the type and only confirmed locality of *P. h. hosei*, so its presence in the park is plausible. Brandon-Jones (1997) mapped many localities for *P. h. everetti*, of which the closest to Similajau NP was Gunung Dulit (N3°21', E114°11'), only 90 km due east of it.

Just before or immediately after completing eruption of the permanent dentition, subadult females of *P. h. everetti* acquire a head pelage colour distinctly darker than that of males and juvenile females, which they retain throughout adulthood (well illustrated in Payne *et al*. [1985], as *P. h. hosei*). Brandon-Jones (1997) reinstated *P. h. everetti* because both Hose (1893) and Banks (1931) declared that animals in the lowlands (where lies the type locality of *P. h. hosei, s.s.*) lacked this distinct adult female head pelage. Although neither provided a mature adult female lowland specimen, the implication is that adult females of *P. h. hosei* (the coastal population) retain the juvenile (and male) colour and that *P. h. everetti* (the inland population) is therefore recognisable as a taxon distinct from *P. h. hosei*. The excessive yellowish head pelage of two females from Limbang (N4°45', E115°00'), Sarawak, Malaysia (Brandon-Jones, 1997), suggesting they are subspecifically intermediate (Brandon-Jones, 1999), reinforces this conclusion. Given the few apparent *P. hosei* individuals observed in Similajau NP, the absence there of sexual dichromatism cannot be confirmed, but is suggested by the lack of any noted difference between adults and juveniles.

Both sexes of both *P. h. hosei* and *P. h. everetti* have much luxuriant 'clean' white head pelage. The reported lack of such pelage in Similajau NP animals seen in 1986 and 2005 accords better with *P. h. sabana*. And although the 2002 animals showed clean white lateral head pelage (not shown by *P. h. sabana*; DB-J, pers. obs.), its extent fitted that of the contrastingly paler grey pelage shown by *P. h. sabana* (as illustrated in Payne *et al*. 1985), not the extent shown by *P. h. hosei* or *P. h. everetti*. These similarities to *P. h. sabana* may simply be convergent, because *P. h. sabana* is the northeastern subspecies of *P. hosei*. Its nearest confirmed locality is almost 400 km away from Similajau NP, in southern Sabah, separated by the entire range of *P. h. hosei* and *P. h. everetti* (Brandon-Jones, 1997). Southeast of *P. h. everetti* in eastern Borneo lives *P. h. canicrus* Miller, which, like *P. h. sabana*, lacks bright white pelage on the head (Brandon-Jones, 1997). This subspecies has dark facial skin down to the ear-mouth line. The 1986 and 2005 Similajau NP animals therefore are not this subspecies.

Based on known range, the unidentified Similajau NP surili would be most likely to be *P. h. hosei*, but what is believed to be a characteristic feature of this taxon, the luxuriant white lateral head pelage, was not present on some of the best-seen animals. Conceivably, but improbably, a surili taxon new to science might be endemic to Similajau NP and its immediate environs. A perhaps more plausible alternative to this tiny-range hypothesis can equally accommodate the apparent physical irregularities of the sighted animals. It is that when reporting *P. h. everetti* absent from the lowlands, Hose's (1893) observations pertained to animals north of Niah and that Niah represents the western limit of what would therefore be called *P. h. hosei* (with *P. h. everetti* as a synonym), or that his holotype was mislabelled and actually came from further east. This would mean there are no known study specimens of the sexually monochromatic coastal population: the animal discussed as *P. h. hosei* by Brandon-Jones (1997). This potential subspecies could occur from Similajau NP to western Brunei and be more distinct from what is presently called *P. h. everetti* than is Brandon-Jones's (1997) concept of *P. h. hosei*. There is also the possibility of hybridisation between *P. chrysomelas* and *P. hosei*, especially as other sighted animals approximating *P. chrysomelas* in appearance had some skin and pelage features of *P. hosei*. The available evidence is too fragmentary or contradictory to discriminate convincingly between these possibilities.

All primates seen in 1986 were shy, reflecting the heavy hunting in the then unstaffed and unmanaged park. In both 1995 and particularly 2005, colobines were shyer than were Long-tailed Macaques *Macaca fascicularis* (Raffles) and Bornean Gibbons *Hylobates muelleri* Martin, both of which could (in contrast to 1986) be readily observed almost whenever encountered. Although some surilis could be watched closely and for prolonged periods in 1995, this was not universal. Such confiding behaviour was never observed in 2005 (although gibbons and macaques remained relatively unconcerned by close human presence): those seen well were not aware of the observer; and on noticing him departed promptly and fled far enough to be

out of view. That the surilis were so much shyer than the gibbons or macaques suggests the possibility of targeted hunting, as can occur elsewhere (e.g. Nijman, 2005, 2010). In any case, the current status of these surilis in Similajau NP cannot be considered secure. Therefore, it is important to identify the taxon present and, depending on the answer, there may be a very high priority to clarify its conservation needs, followed by conservation interventions (if it still survives) to prevent its loss. Given that one taxon of Hose's Surili is sexually dichromatic whereas the others are not, particular attention should be paid to assessing the precise appearance of head pelage of as many animals as possible in each troop. Concerning *P. h. hosei* (*s.s.*), Brandon-Jones's (2006) other hope for its survival, Brunei, is probably the best place to seek the taxon, if it is not already extinct.

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