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Blue-wattled Bulbul *Pycnonotus nieuwenhuisii* and Black-browed Babbler *Malacocincla perspicillata*: two Sundaic passerines in search of a life

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Introduction

Bird species known from just one or two specimens and no other evidence for their existence present taxonomists and conservationists with a dilemma: are they representatives of real species, probably on the verge of extinction if no-one can find them, or are they hybrids, aberrations or artefacts that run the risk of wasting good money in the attempt to rediscover them? The Asian region has its share of such problems, and in recent years *BirdingASIA* has highlighted some of them: *Tarygnathus heterurus* (Collar 2006), *Argusianus bipunctatus* (Davison & McGowan 2009), *Caprimulgus centralasicus* (Leader 2009) and *Ptilinopus arcanus* (Collar & Lambert 2013)—the verdicts in these cases being to deny the validity of the first and second taxa and affirm the validity of the third and fourth.

Many of the older-established museums possess such specimens. Naturalis—the modern name for what was the Rijksmuseum voor Natuurlijke Historie and whose catalogue initials are still RMNH—in Leiden, Netherlands, holds several, among them two passerine taxa from the Greater Sundas whose English names make them a happily alliterative couple: the Blue-wattled Bulbul *Pycnonotus nieuwenhuisii*, known from two specimens taken on Borneo and Sumatra, and the Black-browed Babbler *Malacocincla perspicillata*, taken almost certainly on Borneo. The mystery that surrounds them, as in all the best stories, creates a simultaneous pleasure and pain, intrigue and irritation. Do they have taxonomic life? Do they have real life? If so, where are they? And what are the chances we will ever find out?

Blue-wattled Bulbul: the history

Anton Willem Nieuwenhuis (1864–1953) spent his early adult life as a doctor with the Dutch army, making several long expeditions through the interior of Kalimantan, Borneo. His major interests were in ethnology and geography, but he collected natural history specimens as well, sending them back to the Rijksmuseum in Leiden (where from 1904 he was to become a professor). The birds in his collections were identified and documented by

Otto Finsch (Finsch 1905), a German ornithologist recruited to the museum (1898–1904) by its director Hermann Schlegel, himself a German who had in turn been recruited by Temminck.

One of the bird specimens Nieuwenhuis collected appeared to be new to science. It was a bulbul, taken in October 1900 near the source of the Bulungan river, on the upper Kayan river in north-central Borneo, at 600 m, and in its discoverer's honour Finsch (1901) named it '*Poliolophus Nieuwenhuisii*'. His description was notably elaborate and precise (my translation):

Adult male. Upperparts dirty olive-green; rump black but part-hidden by the feathers' broad greyish olive-green fringes; uppertail-coverts greyish olive-green; upperwing-coverts, secondary coverts and outer vanes of the primaries olive-green, the colour of the back, rest of the wing black, bordered white on the base of the inner vanes (particularly obvious on the undersides); primary coverts black; carpal, underwing-coverts, and scapulars pale sulphur-yellow; head, head-sides, chin and upper throat matt black with an olive-green sheen, gradually blending into the colour of the adjoining body, and only the somewhat elongate pointed feathers of the back of the head, forming a short crest, pure black, like the lores and angle of the chin; [lower] throat, neck-sides and crop matt grey-olive, washed greenish, as the breast-sides, the remaining underparts paler, more yellowish-grey; belly, vent and undertail-coverts pale sulphur-yellow, slightly darker than the underwing-coverts, these colours flowing into each other; tail feathers dusky olive-green, changing gradually to black distally but with whitish-yellow tips, rather broad on the outer feathers, up to 8 mm on the outer vanes, narrower towards the centre so that the central pair have only very narrow pale tips. Bill and feet black; under the eyes a narrow bare patch of skin.

Despite all this detail, he sent the specimen for a second opinion and further comparisons to R. B.

Sharpe in the British Museum, reporting that Sharpe considered it a new species most closely related to Black-headed Bulbul *Pycnonotus atriceps* (known then to Sharpe as *Brachypodius melanocephalus*). Over a century ago birds now assembled in the genus *Pycnonotus* were dispersed through several other genera, and Finsch decided that the short crest on the nape and the bare skin under the eye indicated that his new species belonged in the genus *Poliiocephalus* rather than *Brachypodius*.

Of the two large Sundaic islands, Borneo was considerably less explored than Sumatra. There is no record to show whether twentieth-century ornithologists were surprised that no more was heard of the new bulbul in Borneo, but there is one small piece of evidence that its occurrence on Sumatra was not anticipated. On 21 March 1937 Andries Hoogerwerf (1906–1977) collected a specimen, again an adult male, at 700 m at Lesten, Aceh province, in the north of the island, and his important little collection was deposited in Bogor, where it fell to F. N. Chasen of the Raffles Museum, Singapore, to evaluate the material. Chasen's (1939) diagnosis was as short as Finsch's was long:

Like *E. nieuwenhuisii* of Borneo, but the throat and the breast greyer and less green. Wing, 84 mm... This bulbul is one of the rarest of all birds... and its discovery in Sumatra is one of Mr Hoogerwerf's most noteworthy results.

His surprise at finding a new subspecies and major range extension of the Bornean bird was evident from the name he gave it (the genus had changed again): *Euptilosus nieuwenhuisii inexpectatus*.

Subsequently the two men joined forces to contemplate this specimen and its significance a little more. Chasen & Hoogerwerf (1941) gave its dimensions as wing 84 mm, tail 73 mm, tarsus 18 mm, culmen 15 mm and bill from gape 21 mm, 'iris, red; edges of the eyelids pale blue; bill and feet, black'. They noted that Baron van Plessen had failed to find it in 1935 when visiting the Bornean type locality, and they considered the plate Finsch commissioned for the original description (Plate 1) to be 'a good representation of it, excepting that it does not show the pale blue fleshy edges of the eyelids' (although it is worth noting that Finsch did not state the colour of the eye-ring in the specimen he described), adding:

The Sumatran bird seems to be slightly brighter and paler than the type of *nieuwenhuisii*, rather greener and less greyish above, and paler yellow below; with the head less blackened and more grey; the dark throat less sharply defined against the breast; and the lower throat and breast

greyer and less green. There is little difference in size between the two races. In *nieuwenhuisii* the wing measures 88 mm in length.

Writing in the first person despite the paper's co-authorship, Chasen went on to acknowledge that he (Chasen 1935) had perhaps been too radical in placing *nieuwenhuisii* as a subspecies of the Yellow-wattled Bulbul *Pycnonotus* (then *Poliolophus*) *urostictus* of the Philippines:

...but although the general appearance of the birds, their geographical distribution, and the most conveniently placed, and coloured, intermediate Basilan race of *urostictus* all suggest that my nomenclature was justified, I now incline to a more conservative view in the matter of writing the name: *urostictus* has a longer crest and maybe in life it has more pronounced fleshy edges to the eyelids than *nieuwenhuisii*...

Finally the paper quoted the field notes made by Hoogerwerf, who discovered it on a small island in the Lesten river, in secondary growth and pasture, not far from some houses. Many other bulbuls were on the island including *P. atriceps*,

Plate 1. The plate accompanying the original description of *Pycnonotus nieuwenhuisii*.



but the new bird (to which *P. atriceps* showed a 'striking resemblance') 'sat all by itself in a low shrub by the side of the river'. Recognising it as new, Hoogerwerf tried to find other specimens over the next few days without success.

Hoogerwerf's failure set a trend that remained unchanged for 76 years; no further specimens have ever been collected. Even so, apart from a remark in Smythies (1957) that it 'may be a race of *P. urostictus*' (as previously suggested and then retracted by Chasen), no-one questioned the validity of the species: it appears in Smythies (1960, 1981), Rand & Deignan (1960), Walters (1980), Clements (1981, 1991 [where it was described as extinct], 2000 [where race '*inexpectatus*' was described as 'rediscovered in 1996 after 60 year absence in nw Sumatra'], 2007 [where race '*inexpectatus*' was described as 'rediscovered in nw Sumatra and Borneo']), van Marle & Voous (1988), Sibley & Monroe (1990), MacKinnon & Phillipps (1993), Monroe & Sibley (1993), Wells (1998), Smythies & Davison (1999), Dickinson (2003), Fishpool & Tobias (2005), Gill & Wright (2006), Mann (2008), Myers (2009), and Phillipps & Phillipps (2011). It was also listed as a threatened species in Collar & Andrew (1988) and Collar *et al.* (1994).

However, it disappeared from the BirdLife threatened species list at the turn of the century. It is not listed in either Stattersfield & Capper (2000) or BirdLife International (2001). What had happened? 'Blue-wattled Bulbul rediscovered' was the answer, at least in part—albeit not in the way Clements (2000, 2007) reported. Williams & Mitchell (1992), using perhaps an overly confident title, reported making five sightings of the species during a mass fruiting of forest trees, notably *Macaranga*, in September 1992 along the Belalong river near the Kuala Belalong Field Studies Centre in Temburong district, Brunei. They offered no description but reported they 'obtained very close views of the bulbul which is illustrated and described in *The birds of Borneo* (Smythies 1981), and will check their field notes against the types specimens'. The senior author of this note, Rob Williams, having duly reviewed the Naturalis material, gave further information to Collar *et al.* (1994), who reported that the site of this observation was in 'Batu Apoi National Park, in lowland dipterocarp forest at about 60 m', continuing:

It is unusual for a species of bulbul to be widespread but to occur at such low densities, so this form may represent an extremely rare morph of another species or else hybrids, although its apparent rarity could also be because of the difficulty in locating and

identifying it among other bulbuls (Williams in prep.).

The suggestion of a hybrid origin was in fact first made to Williams by René Dekker when Williams visited Leiden to inspect the two types (the Sumatra specimen having been moved there from Bogor where Chasen had examined and described it). In researching the issue Williams became increasingly persuaded of the plausibility of this explanation, such that, as a result of his personal contact with BirdLife in the 1990s, BirdLife International (2001: 20) set the species to one side, referring to a typescript submitted by Williams to *Forktail* (Williams 2002) as 'convincing'.

Blue-wattled Bulbul: the theory

Williams (2002) reported sightings of one or more birds (only ever singletons) in the 'Batu Apoi Forest Reserve' (described above as Batu Apoi National Park) on five occasions in September 1992. He saw single birds in a fruiting *Macaranga aetheadenia* tree in a stream gully on 1, 2 (morning and afternoon) and 3 September, and roughly 1 km downstream on 16 September. On 1 September a second bird may or may not also have been present. He was able to take a description on the afternoon of 2 September, here condensed as:

Medium-sized bulbul, very like Black-headed... in size... [but apparently] slightly more slender and longer-tailed... pale [with] washed-out appearance and lacking the brightness and contrast of *P. atriceps*... head completely blackish with a slight olive sheen on nape... black throat continued onto upper breast, which was dark olive green-grey fading to yellow on belly, giving smudgy appearance... lower belly and undertail-coverts progressively brighter yellow, but... dull in comparison to *P. atriceps*... upperparts dark olive... wings appeared dark when perched... carpal area pale yellow... tail seen poorly, appeared greyish and noticeably paler terminally... legs and bill appeared black... eye at least partially surrounded by blue ocular ring most noticeable on lower and rear aspects... iris appeared dark brown.

This is indeed a good match for the two known specimens. Williams (2002) reported that 'the bird I saw was closer to the Bornean specimen than to the Sumatran, as it appeared dark blackish and not grey on the head', the one point of divergence from both being that 'the yellow on the belly appeared slightly less bright on the specimens'.

In discussing the situation, Williams (2002) found the scarcity of *P. nieuwenhuisii* hard to

explain, given its wide range and apparent use of primary and secondary habitats plus the increasing numbers of visiting birdwatchers in both Sumatra and Borneo. He pointed to the Liberian Greenbul *Phyllastrephus leucolepis* as evidence that bulbuls can be rare, but noted that the great majority of bulbul species are common. Consequently he suggested that the Blue-wattled Bulbul could be (1) a morph of a commoner species, (2) a genuinely rare species or (3) a hybrid. He dismissed the morph proposition because there is no other form that it closely resembles—the tail pattern (broad pale tips) and bare eye-ring seem improbable in a morph. He considered that if it is taxonomically valid then it must either occupy a hitherto undetected special habitat or have wandered from such habitat. However, by trawling in the African literature he found cases where hybridisation between two species had produced offspring with ‘unusual’ eye-ring colours and enlargements, and he concluded that *nieuwenhuisii* ‘may be an intrageneric hybrid’ and probably should be treated as such. His choice of most likely parent species were Black-headed Bulbul and ‘probably’ Grey-bellied Bulbul *P. cyaniventris*, because a cross between them might well result in the overall colouration of *nieuwenhuisii*. However, he found the tail pattern harder to explain, because both parent species ‘have... a distinctive dark subterminal band’ whereas *nieuwenhuisii* ‘shows... no defined dark subterminal band’.

This last comment is not, in fact, accurate. As Plate 2 reveals, *P. atriceps* has a very strong subterminal band, whereas *P. cyaniventris* can merely show a distal broadening of the blackish colour that runs the length of the central part of the tail feathers; moreover, the two *nieuwenhuisii* do in fact show a dark subterminal band, more obvious on the Bornean nominotypical than on Sumatran *inexpectatus*, so in this regard the tail pattern of *nieuwenhuisii* is arguably intermediate. On the other hand, four factors militate against *nieuwenhuisii* representing an *atriceps* × *cyaniventris* hybrid: (a) both species are smaller than *nieuwenhuisii*, notably so in the case of *cyaniventris* (Plate 2 and Table 1); (b) both have darker crowns, more sharply defined on the nape from the mantle; (c) both have brighter yellow vents, wing-coverts and fringes to flight feathers; (d) both have blacker primaries. Of course, if an exaggerated eye-ring can occur in hybrids of two species that do not show this character, hybrid bulbuls might not always be intermediate in characters between the two parents; nonetheless it seems a little unsafe simply to disregard these four obstacles to an *atriceps* × *cyaniventris* origin of *nieuwenhuisii*.



Plate 2 a,b,c. Ventral, lateral and dorsal views of (left to right) *Pycnonotus cyaniventris*, *P. nieuwenhuisii inexpectatus*, *P. nieuwenhuisii nieuwenhuisii* and *P. atriceps*.

Table 1. Mean measurements (mm) by NJC of *Pyconotus nieuwenhuisii* (two male specimens in Naturalis) and its various congeneric candidate parent species (all specimens in NHMUK). All parent species specimens were identified on their labels as male, and all had the provenance of Borneo (hence the relatively small sample sizes). n = number of specimens measured. ¹ = sample size reduced by 1. Bill was measured from skull, wing curved, tail from tip to point of insertion, tarsus with difficulty.

English name	scientific name	n	bill	tarsus	wing	tail
Blue-wattled Bulbul	<i>P. nieuwenhuisii</i>	2	18.2 ¹	16.4	84.7	68.7
Black-headed Bulbul	<i>P. atriceps</i>	7	15.3	14.7	76.6	64.7
Grey-bellied Bulbul	<i>P. cyaniventris</i>	3	14.7 ¹	14.3	74.0	61.7
Yellow-vented Bulbul	<i>P. goiavier</i>	4	17.9 ¹	20.9	85.3	83.3
Olive-winged Bulbul	<i>P. plumosus</i>	7	17.5	21.8	81.5	70.4
Cream-vented Bulbul	<i>P. simplex</i>	7	16.2	18.0 ¹	79.6	70.3
Red-eyed Bulbul	<i>P. brunneus</i>	5	16.7	19.6	83.5	73.0
Spectacled Bulbul	<i>P. erythrophthalmos</i>	9	13.6 ¹	15.4	73.7	63.5

Clearly, however, *atriceps* shows the greatest general similarity to *nieuwenhuisii*, including the ill-defined but strong blackish maculations on the rump. If therefore we accept that *nieuwenhuisii* is a hybrid and that *atriceps* is one of the parents, what other parent species than *cyaniventris* might conceivably result in the colour pattern that we see? None of the other colourful *Pycnonotus* bulbuls that inhabit Borneo and Sumatra seems to be likely: not Straw-headed *P. zeylanicus* (far too large), Black-and-white *P. melanoleucos* (colour as its name indicates), Black-crested *P. melanicterus* (too similar to *atriceps*), Scaly-breasted *P. squamatus* (ditto), Puff-backed *P. eutilotis* (too rusty above), Flavescent *P. flavescens* (too large particularly in tail length, and with a yellow vent) and Yellow-vented *P. goiavier* (too well marked on the head, too yellow-vented, and morphometrics somewhat disproportionate, notably the tail: Table 1).

So could one of the nondescript species of *Pycnonotus* on the two islands—Olive-winged *plumosus*, Spectacled *erythrophthalmos*, Cream-vented *simplex* or Red-eyed *brunneus*—have the effect of muting the colour of the belly and vent of *atriceps*, and of blurring its well-defined transitions of colours? We need a species that is larger than Blue-wattled on all measurements to counteract the slight size deficit shown by Black-headed, but none of the above quite fits this requirement: Spectacled is much smaller on all measurements made (Table 1), while the other three are longer-legged and longer-tailed but shorter-billed and shorter-winged than Blue-wattled. Admittedly these differences are not particularly great and the sample sizes are small, but the evidence is still stacked against these nondescripts as being part of the equation—and somehow the notion of a mixed pair involving *atriceps* and, say, *plumosus* is at the far boundary of plausibility.

Thus while instinct and logic continue to press the case for a hybrid solution to the mystery of *P.*

nieuwenhuisii, the evidence remains stubbornly defiant. Clearly a solution to this taxonomic *impasse* is molecular analysis. Indeed, one such project, mentioned in Phillipps & Phillipps (2011), has already taken place but was not in fact completed (R. Dekker & S. van der Mije verbally 2013). Consequently Naturalis staff are again poised to investigate this option. Meanwhile, although acknowledging the plausibility of the hybrid hypothesis, Dickinson & Dekker (2002) chose to continue provisionally to recognise *nieuwenhuisii*, and in the light of the mensural and plumage evidence in this brief review such a position may be more appropriate than BirdLife's current acceptance of its hybrid status.

Black-browed Babbler

With its long strong bill, black forehead, supercilium and preocular spot, whitish lores and eye-ring (hence *perspicillata*—‘spectacled’) and grey underparts with deep rust flanks, nobody has suggested that *Malacocincla perspicillata* is a hybrid (what could the parents be?), but it went through a 20-year period when it was thought to be conspecific with or at least very close to another single-specimen ‘species’, *M. vanderbilti*. This tangle was unravelled first by Hoogerwerf (1966) and then by Mees (1995), in the course of demonstrating that *vanderbilti* was simply a synonym of the Sumatran race *barussana* of Horsfield's Babbler *M. sepiaria* (Mees exasperatedly vindicating the findings of Hoogerwerf, whose paper had been widely ignored).

Mees (1995) explicitly stated that *perspicillata* does not ‘look like a hybrid’ and rejected ‘the possibility that it might be an artefact’. However, he was less confident about its generic position:

...the traditional placement in *Malacocincla* can be retained on the basis of the distinct facial markings and especially the short tail. In some

characters, however, it is clearly outside the limits of *Malacocincla* as defined by these authors [Ripley & Beehler 1985]: the facial markings are more striking than in any other species; in the low tarsus/wing ratio it agrees with *Malacopteron*, and the grey breast with white streaks is unique in the genus. The generic diagnosis of *Malacocincla* will have to be modified to take in *M. perspicillata*.

The diagnosis of *Malacocincla* in Collar & Robson (2007: 79) is 'bill and rictal bristles as *Malacopteron*, but with strong legs, large feet, and the tail considerably shorter than the wing', which appears to fit *perspicillata* well, but it is certainly true that the bold black superciliary line suggests a throwback to the genus *Alcippe* while the white shaft-streaks on the grey breast somewhat resemble those on Rusty-headed Babbler *Robsonius rabori* which, however, proves not to be a babbler and was recently renamed Sierra Madre Ground Warbler *R. thompsoni* (Hosner *et al.* 2013). Büttikofer (1895) saw the superciliary line, whitish lores and white-streaked breast, 'together with the slight black edgings to the feathers of the crown and... rather long wings', as suggesting a relationship to *Turdinus*, 'but the short tail and its proportion to the tarsi can leave no doubt as to its

real position' as a *Malacocincla*, albeit 'the largest of the genus'. My own measurements of the specimen are in Table 2, where it can be seen that Mees's (1995) concluding remark, that its 'short tarsus suggests, perhaps, that it is more arboreal than its congeners', is contradicted by the evidence of specimen material in NHMUK (even when his measurement of the tarsus at 26 mm is allowed). It is also worth noting that the description of the iris as yellow in MacKinnon & Phillipps (1993) is entirely speculative; Mees (1995) considered it possible that the pale glass irides given to the type specimen (Plate 3) were based on some lost information, but there is no other evidence of eye colour in the species.

The big mystery surrounding Black-browed Babbler is twofold: first, where did the type specimen come from and, second, can the species be found again or is it extinct? The label attaching to the specimen says 'Java', apparently simply because Prince Bonaparte, who described the form, mistakenly presumed this provenance. In fact its collector, the German geologist Carl Anton Ludwig Maria Schwaner (1817–1851), is only known to have explored in Borneo (1843–1848), and this is where Büttikofer (1895) bluntly asserted it had been taken. According to Mees (1995) Schwaner 'collected mainly in the Martapoera [Martapura] and Bandjermasin [Banjarmasin] regions, especially the former', and on this basis 'it may safely be assumed that *M. perspicillata* is a lowland bird, and it is likely that it is from the neighbourhood of Martapoera'. This is how the species has been mapped ever since, in the southernmost part of eastern Borneo in South Kalimantan (Stattersfield & Capper 2000, BirdLife International 2001, Myers 2009, Phillipps & Phillipps 2011), where two nature reserves were identified as places to look for the species—Pleihari Tanah Laut, a swampy coastal reserve covering 350 km², and Pleihari Martapura, near the (presumed) type locality, covering 300 km² at 200–1,170 m, although sadly the habitat at the former has long since been destroyed and the latter now consists of severely degraded hilly forest (BirdLife International 2001).

An excellent 3D view of the type specimen can be viewed on the Naturalis website, in a section for extinct species (<http://nlbif.eti.uva.nl/naturalis/detail.php?lang=uk&id=13>). The assumption has been made that an absence of 165 to 170 years is an indication of an absence of another type entirely: the possibility of the extinction of *M. perspicillata* was explicitly raised in Clements (1991) and Dickinson (2003), while Clements (2000, 2007) treated it categorically as extinct. The main reason for this pessimism is the almost complete

Plate 3. The type of *Malacocincla perspicillata*.



Table 2. Measurements (mm) by NJC of *Malacocincla perspicillata* (specimen in Naturalis) and means of five specimens of congeners (*sensu* Collar & Robson 2007). All latter specimens were in NHMUK and identified on their labels as male apart from two unsexed *M. cinereiceps* (which however have longer bills than the two female specimens in the collection, and were the only two specimens with intact bills). All specimens of *M. abbotti* are from the Malay Peninsula (race *obscurior*; no Bornean material present); all specimens of *M. sepiaria* and *M. malaccensis* are from Borneo (races *rufiventris* and *poliogenys* respectively); *M. cinereiceps* is from Palawan. ¹ = sample size reduced by 3; ² = sample size reduced by 2.

English name	scientific name	bill	tarsus	wing	tail
Black-browed Babbler	<i>Malacocincla perspicillata</i>	21.5	29.4	86.9	48.9
Abbott's Babbler	<i>Malacocincla abbotti</i>	19.5	25.9	73.3	51.6
Horsfield's Babbler	<i>Malacocincla sepiaria</i>	19.2	26.9	73.8	41.5
Short-tailed Babbler	<i>Malacocincla malaccensis</i>	17.6	27.9	66	33.1
Ashy-crowned Babbler	<i>Malacocincla cinereiceps</i>	18.4 ¹	27.5	61.5	27.4 ²

destruction of forests in the area which Schwaner is known to have prospected. However, species in the genera *Malacocincla* and *Trichastoma* occupy forest-edge habitats with their characteristic broken-canopy, heavily tangled character and this has 'allowed them also to colonize low-stature climax forest such as peat-swamp-forest, upland and coastal heath-forest, mangroves and nipa palm (*Nypa*) swamps' (Collar & Robson 2007: 94), and even after so huge a gap of time it is surely too soon to be writing off the Black-browed Babbler. Who in recent years—or indeed in living memory—has spent any time systematically birdwatching in what wooded habitats remain in southern South Kalimantan? It is time someone did.

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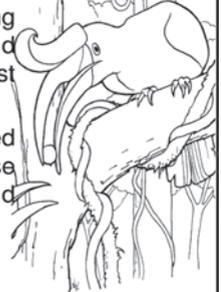


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