### Systematic notes on Asian birds. 48.

# Nomenclatural chaos untangled, resulting in the naming of the formally undescribed *Cacatua* species from the Tanimbar Islands, Indonesia (Psittaciformes: Cacatuidae)

#### C.S. Roselaar & J.P. Michels

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Cees S. ('Kees') Roselaar, Section Vertebrates, Zoological Museum, University of Amsterdam, P.O. Box 94766, 1090 GT Amsterdam, The Netherlands. (e-mail: c.s.roselaar@uva.nl).

J. Pieter Michels, Section Vertebrates, Zoological Museum, University of Amsterdam, P.O. Box 94766, 1090 GT Amsterdam, The Netherlands. (e-mail: michels@science.uva.nl).

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The history and taxonomic status of the species-group names *Lophochroa goffini* Finsch, 1863, and *Cacatua tanimberensis* Roselaar & Prins, 2000, both used to name the Tanimbar Corella, are reviewed nomenclaturally. It is confirmed that *Lophochroa goffini* (sensu Finsch, 1863) is not applicable to the Tanimbar Corella, but represents a junior synonym of *Cacatua ducorpsii* Pucheran, 1853, as shown by Roselaar & Prins (2000). The substitute name *Cacatua tanimberensis* they proposed is an objective junior synonym of *L. goffini* and subjective junior synonym of *C. ducorpsii*. From the nomenclatural point of view, the Tanimbar Corella remains undescribed and is here named.

#### Introduction

The family Cacatuidae represents one of the better-defined lineages within the order Psittaciformes (e.g. Adams et al., 1984). The most speciose genus is Cacatua Vieillot, 1817, with a distribution essentially identical with that of the family, covering large parts of Australia, New Guinea, the Bismarck Archipelago, the Solomon Islands, and west through the Moluccas, Sulawesi, the Philippines and the Lesser Sunda Islands to Lombok and a disjunct population on islets in the Java Sea (Forshaw, 1973; Juniper & Parr, 1998). Phylogenetic studies (e.g. Adams et al., 1984; Brown & Toft, 1999) have shown that three groups can be recognised within the genus Cacatua Vieillot, 1817. Schodde (in Schodde & Mason, 1997) was prompted to definitely subdivide the genus into three subgenera, with the distinctive species C. leadbeateri (Vigors, 1831) placed in a monotypic subgenus. The remaining 11 species were placed in Cacatua (Cacatua), accommodating the large 'true' cockatoos with broad wings, blackish bills and large crests, and the subgenus Licmetis Wagler, 1832, harbouring the small so-called corellas, sporting slender wings, light-coloured bills and small crests. The Australian corellas have been reviewed by Schodde et al. (1979) and Ford (1985), with the latter author splitting Schodde et al.'s (1979) broad concept of C. pastinator (Gould, 1841) by elevating C. sanguinea (Gould, 1843) to species level, and so raising the number of corella species in Australia to three, with C. tenuirostris (Kuhl, 1820). There are conflicting views,

however, on the number of valid subspecies between several authors (e.g. Schodde in Schodde & Mason, 1997 vs. Forshaw, 2002). Outside Australia, four other corella species are generally recognised: *C. haematuropygia* (Statius Müller, 1776) on the Philippines; *C. ducorpsii* Pucheran, 1853, on the Solomon Islands and Bougainville (Papua New Guinea); *C. sanguinea* through the doubtfully distinct subspecies *C. s. transfreta* Mees, 1982, in southern New Guinea; and a fourth species on the Tanimbar Islands in the south-western Moluccas.

The corella of the Tanimbar Islands has a relatively complex history that is explained below. Roselaar & Prins (2000) demonstrated that the syntypes of *Lophochroa goffini* Finsch, 1863, a species name universally accepted as applying to the Tanimbar Corella, instead represent *C. ducorpsii* Pucheran, 1853. They intended to provide a substitute name for the undescribed species, but in fact created a junior synonym. The purpose of this paper is to provide the still formally unnamed *Cacatua* from the Tanimbar Islands with a new name by describing it as a nomenclaturally new species.

See Acknowledgements for definition of museum acronyms.

#### History

The taxonomic identity of cockatoos of the Kepulauan Tanimbar (also called Timor-Laut, Timur-Laut, Tenimber, Tenimbar or Tanimber Islands in older literature) was confused for a period in the 19th century. Initially, Schlegel (1864) suggested that the unknown origin of Cacatua citrinocristata (Fraser, 1844) was probably situated in this island group when writing "probablement l'Archipel de Timor-laout". Wallace (1864) also speculated that C. citrinocristata occurred there, writing "This bird is often brought alive to Macassar [present-day Ujung Pandang in South Sulawesi] in praus from the Timor-Laut and Tenimber islands". Schlegel (1866) again referred to C. citrinocristata as being from the "îles Tenimber". Sclater (1883a) too suggested that the "small white cockatoo" as entered in Henry O. Forbes' diary, while collecting on the Kepulauan Tanimbar, most likely was C. citrinocristata, a taxon currently classified as a subspecies of C. sulphurea (Gmelin, 1788) and now known to be endemic to distant Sumba, Lesser Sundas. However, when Sclater (1883b) did examine voucher specimens of the Tanimbar Corella sent by Forbes, he arrived at the conclusion that they did not represent citrinocristata but rather C. sanguinea, previously known only from Australia. So Büttikofer (1886) resurrected goffini of Finsch (1863) from the synonymy of sanguinea Gould, 1843, in which it had been explicitly placed by Schlegel (1866) and implicitly placed there by Schlegel (1864) and Sclater (1883b). Büttikofer's motivation for reinstating Cacatua goffini was the smaller size, as expressed in wing and tail lengths, although in his view the two were difficult to differentiate. More importantly, Büttikofer was the first to associate this name with the Tanimbar Corella, a practice followed universally by subsequent authors until recently.

Otto Finsch (1863) published a Dutch guide to the live parrot collection in the Amsterdam Zoo 'Natura Artis Magistra', written purposely for the visitors. A number of new species were proposed and among these was *Lophochroa goffini*. The brief description reads as follows, in translation: "[LOPHOCHROA] GOFFINI, new species. – Goffin's Cockatoo. – 2 specimens. White, feathers of the head and neck pink at the base; the high, straight crest feathers even more intense pink at the base and pale yellow

on the lower side as well as the flight feathers and below the tail at the base. Bill pale yellowish. Eye ring small, bluish. A new species, distinguished by the small eye ring, the red at the base of the neck feathers and the yellow lower side of the crest feathers; also, it is smaller and just the same size as the next ["MINOR" = *C. haematuropygia* (Statius Müller, 1776)]. I have dedicated this beautiful species to Mister A. GOFFIN out of friendship."

Thus two aviary specimens without stated locality data formed the basis of this species, subsequently also referred to as *Cacatua Goffinii* by Schlegel (1863) in his book on the birds of the Amsterdam Zoo, in which he expressed the suspicion that they probably came from the "Papoe-eilanden". The blue periophthalmic ring (the patch of bare skin surrounding the eye), the apparent absence of an obvious pink or reddish loral patch, and the coloration of crest and nape feathers in the descriptive account disagree with the currently employed concept in which *Cacatua goffini* is used for a corella species restricted to the Moluccan Kepulauan Tanimbar. Ramsay (1891), in a footnote, already noted that Salvadori's (1889) description of *C. goffini* (based on Tanimbar material) disagreed with Finsch's original account because Salvadori's specimens were stated to possess red pigment on the lores and along the base of the culmen. Ramsay went on to suggest that *goffini* might turn out to be either a variety of *C. sanguinea* or a senior synonym of *C. gymnopis* Sclater, 1871, but left the matter unsolved.

This problem was first dealt with by Roselaar & Prins (2000) and after examination of the two syntypes now deposited in the ZMA (ZMA 141 and ZMA 142), they concluded that they in fact represent "C. ducorps Bonaparte, 1850" (= C. ducorpsii Pucheran, 1853), from the Solomon Islands.

Under the new generic combination Plictolophus goffini, Finsch (1867: 309) made the puzzling remark that RMNH 87994, from the Rotterdam Zoo, represented the type specimen, "zwar der Type". Interestingly, and perhaps following Finsch (1867), Schlegel (1874) also considered it the "type de la Lophochroa Goffinii", although in 1864 he made no such statement while discussing the same specimen. Büttikofer apparently adopted this assumption as well, when he stated: "the specimen [...] in the Leyden Museum [...] is the type of Plictolophus Goffini". Van den Hoek Ostende et al. (1997) did the same, cataloguing this particular specimen as a "syntype", without commenting on other syntypes and failing to note the evident incongruity of its Rotterdam Zoo provenance. The type status of the RMNH specimen refutes the original, implicit designation by Finsch (1863) of two specimens in the Amsterdam Zoo as sole type material and therefore must be considered erroneous. Additional support is lent by the fact that clearly Finsch's 1863-description was based on C. ducorpsii, demonstrating that the two ZMA syntypes served as his material for L. goffini. However, there is no reason to interpret this as an attempt to designate RMNH 87994 as neotype, as suggested by Roselaar & Prins (2000), because the principle of neotype designation had not entered common nomenclatural procedure in Finsch's days. In addition, Finsch (1867) also referred to the Amsterdam Zoo specimens in the same account, showing that the original syntypes were still in existence. Von Pelzeln & Von Lorenz (1888: 40) referred to a further alleged "syntype" of Lophochroa goffini in their NMW type catalogue. Apart from the fact that the two syntypes mentioned in the original description are already accounted for with the ZMA specimens at hand, the indication "Ein authentisches Exemplar, durch Finsch' Handschrift als solches bezeichnet, 1870 von Sclater erhalten" suggests that it rather

represents a specimen identified as *goffini* by Finsch and as such authentic (i.e., assigned by the original describer to a taxon personally described), instead of being a type specimen in the strict nomenclatural sense. A critical attitude towards these two alleged types in RMNH and NMW is justified according to Article 72.4.7 of the International Code of Zoological Nomenclature (ICZN, 1999), that emphasises the need of evidence other than that derived from a label or from a work published after the original description, before accepting certain specimens as name-bearing types. We therefore categorically reject the type status of both the RMNH and NMW specimens in the absence of any other supportive evidence, and in the presence of the two ZMA syntypes.

After relegating *Lophochroa goffini* Finsch, 1863, to the junior synonymy of "*Cacatua ducorps* Bonaparte, 1850", Roselaar & Prins (2000) recognised that the Tanimbar Corella was left nameless, no junior synonyms being available. They resorted to providing it with a substitute name, *Cacatua tanimberensis*, as indicated by "New names introduced" (p. 95), "a new name is proposed" and "nom. nov." (both p. 104), and designated RMNH 87994, which indeed represents a Tanimbar Corella, as 'holotype'.

A substitute name (usually proposed to replace unavailable junior homonyms) is not permitted in this instance, as the Tanimbar Corella rather represents a yet unnamed species, because no previously published species-group name was previously or is currently available for it. By terming *Cacatua tanimberensis* a substitute name, Article 72.7 of the Code (ICZN, 1999) comes into effect. It states that "If an author proposes a new species-group name expressly as a replacement (a nomen novum) for an earlier available one, then the two names are objective synonyms; both the nominal taxa they denote have the same name-bearing type despite any simultaneous restriction or application of the new replacement name (nomen novum) to particular specimens or any contrary designation of type". Applying this rule, the ZMA syntypes of *Lophochroa goffini* are the name-bearing types of *Cacatua tanimberensis*, and the designation of RMNH 87994 as holotype is invalid. Thus, *Cacatua tanimberensis* Roselaar & Prins, 2000 is an objective junior synonym of *Lophochroa goffini* Finsch, 1863, and both are subjective junior synonyms of *Cacatua ducorpsii* Pucheran, 1853.

A synonymy and citation history is presented in Appendix I, with particular emphasis on late 19<sup>th</sup> century references.

Consequently, we herewith provide the Tanimbar Corella with a valid name, since from the nomenclatural point of view this taxon is unnamed.

#### Tanimbar Corella

Cacatua goffiniana spec. nov.

Holotype.— RMNH 90750 (ex "C. goffini cat. nr. 3, RMNH 6620."), a skin in good condition; female; collected 22 April 1923 by Dr Felix Kopstein. This specimen was not listed by Stresemann (1934) in a review of birds collected by Kopstein. Incidentally, the illustration of the Tanimbar Corella in Forshaw (1973: unnumbered plate opposite p. 130; 1977: unnumbered plate on the back of p. 122; in later editions, a different specimen was illustrated) was based on this particular individual.

Type locality.— "Saumlaki; Tanimber". In contemporary geographical nomenclature: Indonesia: Propinsi Maluku: Kabupaten Maluku Tenggara: Kepulauan Tanimbar: Pulau Yamdena: Saumlaki (7°57'S, 131°19'E).

Paratype.— RMNH 90751 (ex "C. goffini cat. nr. 2."), a mount in relatively good condition; unsexed adult; from "Timor Laut", Indonesia: Propinsi Maluku: Kabupaten Maluku Tenggara: Kepulauan Tanimbar; collected in 1882 "by the hunters of Mr. Riedel" (fide Büttikofer, 1886: 58), presented by Mr Johan Gerard Friedrich Riedel, then Resident of Ambon. This specimen was described by Büttikofer (1886).

Referred material.— RMNH 87994, a mount; adult female; from the Rotterdam Zoo. ZMA 188, a former mount in the skin collection; unsexed adult; from the Amsterdam Zoo. These specimens were used to obtain morphometric data, but are excluded from the type series, because they lack any information regarding their origin.

Etymology.— Latin adjective in the nominative singular. It is named after Andreas Leopold Goffin, to respect the original intent of Otto Finsch (1863: xxiii; 1867: 309-310) to dedicate a species of cockatoo to him. Articles 57.6 and 58 of the International Code of Zoological Nomenclature (ICZN, 1999) make clear that *goffini* and *goffiniana* cannot be deemed variant spellings of an identical species-group name, and consequently are not homonymous. Recommendation 58A advises against the creation of a new species-group name based on a personal name that has already been used in another species-group name in the same genus, in order to avoid potential confusion. In this case, however, we feel that the advantage of doing so outweighs this disadvantage. *C. goffiniana* will have a familiar ring, closely resembling the name by which the Tanimbar Corella was known incorrectly for a long time. Additionally, *goffini* is placed in the synonymy of *C. ducorpsii*, and no longer denotes a taxon considered taxonomically distinct.

Diagnosis.— This psittaciform species is distinguished from the other cacatuids in general and from its congeners by the following combination of features: 1) general plumage white; 2) lores and bases of feathers of head reddish salmon-pink; 3) ear-coverts tinted with pale yellow; 4) yellow wash on inner webs of underwing- and undertail-coverts; 5) naked periophthalmic ring circular; 6) skin of naked periophthalmic ring white or bluish white; 7) iris dark brown in male, reddish brown in female; and 8) small size, with wing length 210-238 mm and tail length 95-118 mm (pers. obs.; Forshaw, 1973; Juniper & Parr, 1998). Comparisons with several *Cacatua* taxa of the subgenus *Licmetis*, with which it may be confused, are detailed below.

Description of the holotype.— Plumage almost entirely white. The feathering around nostril pale yellow and on lore reddish salmon-pink (colour 106 of Smithe, 1975, but with a reddish hue), the latter forming a large patch between the eye and the base of the upper mandible. The basal half of each feather of forehead and cheek reddish salmon-pink, the colour partly exposed, showing as reddish salmon-pink mottling on cheek and forming a narrow reddish salmon-pink line along the base of the culmen; also, about one-third of the feather-bases reddish salmon-pink on the crown and throat, and about one-fourth on the rest of the head and on the neck, visible only when the feather-tips are raised. Inner webs of flight-feathers, greater under wing-coverts, and inner webs of all tail-feathers except the central pair pale sulfur yellow (colour 157 of Smithe, 1975, but fainter), the yellow pigment extending over the basal three-quarters of the tail-feathers, secondaries, and inner primaries and only on the unemarginated parts of the outer primaries, the terminal part being white, as are the entire outer webs; the pale sulfur yellow is best visible on the undersurface, but only scarcely visible on the upper surface unless the feathers are manipulated to expose the otherwise hidden base. A very slight pale yellow wash

Specimen identity	goffiniana	goffiniana	goffiniana	goffiniana	ducorpsii
Type status	holotype	paratype	none;	none; originally	syntype
• •	Cacatua	Cacatua	'type Cacatua	labelled	Lophochroa goffini
	goffiniana	goffiniana	tanimberensis'	'sanguinea'	Finsch, 1863 and
	sp. nov.	sp. nov.	Roselaar & Prins,		C. tanimberensis
			2000; 'type goffini'		Roselaar & Prins,
			Finsch, 1867		2000
Locality /	Tanimbar	Tanimbar	Rotterdam Zoo	Amsterdam Zoo	Amsterdam Zoo
provenance	Indonesia	Indonesia			
Coll. / entry date	22.iv.1923	1882	8.ix.1864	[1864-'71]	[1863-'71]
Sex	female	unsexed	female	female	female
Museum	RMNH	RMNH	RMNH	ZMA	ZMA
Coll. nr.	90750	90751	87994	188	142
Wing	220	220	225	230	261
Tail	103	113	118	110	128
Bill to skull	32.6	35.3	33.2	35.4	32.5
Bill to nostril	25.6	26.9	25.6	29.0	25.8
Exposed culmen	28.6	29.1	27.8	30.9	27.7
Tarsus	20.1	22.1	23.0	24.9	20.8
Max. crest length	42	41	42	53	56
Outer to longest primary	22	23	23	— **)	26
Inner to longest primary	62	65	— **)	68	69

Table 1. Measurements of Cacatua specimens examined. All data in mm, taken by CSR.

on the ear-coverts. Plumage freshly moulted, bird probably about one year old (inner four primaries new, tips broadly rounded, next absent, outer five somewhat worn, tips slightly pointed).

Feathers on forecrown elongated, up to 41-42 mm long, and c. 13-20 mm wide; feather-tips broadly rounded; and feathers together forming a short, broad crest curved backwards over the crown. Periophthalmic ring circular, c. 17 mm long, and c. 15 mm high, with the eye situated slightly above the middle of circle (see fig. 1). Outer pair of tail-feathers 8-9 mm shorter than central pair. Primary 8 (p8, counted outward) longest, p10 22-23 mm shorter, p1 62-65 mm shorter (see table 1). Outer web of p6-p9 emarginated; emargination at c. 81 mm from feather-tip on p9, c. 78 mm on p8, c. 68 mm on p7, and c. 58 mm on p6.

On the label associated with the specimen, the iris is recorded to have been bordeaux-red, the bill light horn-coloured, and the feet blackish-grey. The original colour of the periophthalmic ring was not noted. It now appears unpigmented pale yellow in the skin.

Description of the paratype.— Entirely similar to the holotype, but feathering (including flight-feathers) more worn, the reddish salmon-pink pigment of the feather-bases on the head more exposed. No record on the label of the coloration of the bare parts when collected.

<sup>\*)</sup> Excluding a juvenile male (wing 227 mm, tail 115 mm, inner to longest primary 74 mm) and an unsexed juvenile (wing 240 mm, tail damaged, inner to longest primary 75 mm).

<sup>\*\*)</sup> Damaged or in moult.

ducorpsii	ducorpsii	ducorpsii	ducorpsii	sanguinea	sanguinea
·	•	•		transfreta	transfreta
syntype	holotype	none; originally	none	holotype	4 paratypes
Lophochroa goffini	Lophochroa leari	labelled 'sanguinea'		Cacatua pastinator	Cacatua pastinator
Finsch, 1863 and	Finsch, 1863			transfreta	transfreta
C. tanimberensis				Mees, 1982	Mees, 1982
Roselaar & Prins,					
2000					
Amsterdam Zoo	Amsterdam Zoo	Amsterdam Zoo	Guadalcanal	S Papua Prov.	S Papua Prov.
			Solomon Isl.	Indonesia	Indonesia
[1863-'71]	[1863-'71]	[1864-'71]	18.iv.1927	30.vii.1959	vii.1959
unsexed	unsexed	unsexed	female	male	3  males, 1  unsexed
ZMA	ZMA	ZMA	RMNH	RMNH	RMNH
141	143	96	107546	42449	42445-42448
268	265	273	254	248	243, 259 *)
126	125	132	126	126	110, 123 *)
30.8	35.4	37.0	37.7	35.5	34.7 (34.0-35.8)
25.6	28.6	31.7	29.8	28.2	26.9 (26.5-27.1)
29.9	31.6	34.3	32.4	30.9	28.8 (27.8-30.4)
22.0	22.8	22.0	25.8	26.2	24.6 (23.0-25.8)
— **)	57	65	60	37	34.8 (34-36)
27	29	27	35	9	11.2 (8-15)
74	69	70	78	83	78, 92 *)



Figure 1. Heads of corellas to show size, shape and pigmentation of periophthalmic skin. From left to right: *C. goffiniana*, holotype, RMNH 90750, female, Yamdena, Tanimbar Isl., Indonesia, 22.iv.1923; *C. sanguinea transfreta*, holotype, RMNH 42449, male, South Papua Prov., Indonesia, 30.vii.1959; *C. ducorpsii*, RMNH 107546, female, Guadalcanal, Solomon Isl., 18.iv.1927.

Measurements.— See table 1. Length of the holotype in the flesh was noted by the collector to be 315 mm.

Similar species.— Cacatua goffiniana is in particular very close to the polytypic Little Corella, C. sanguinea, a species with a more or less similar amount and exposure of reddish pink on the head, with similar pale yellow on the flight-feathers, underwing and tail, and with a similar short broad crest of up to approx. 39-44 mm long. However, according to the data presented in Higgins (1999) and Forshaw (2002) and specimens examined, the subspecies C. s. sanguinea Gould, 1843, C. s. westralensis (Mathews, 1917), and C. s. gymnopis Sclater, 1871, all restricted to Australia, have a much longer wing, tail and tarsus, a longer wing-tip, and a relatively longer p10 than C. goffiniana. The periophthalmic ring is blue-grey instead of white and is larger, extending further down to the cheeks, with the eye appearing situated close to the upper rim of the circle, and not centred (see fig. 1). However, the subspecies C. s. normantoni (Mathews, 1917) from NW Queensland (including Cape York) and C. s. transfreta Mees, 1982, from S New Guinea (SE Papua in Indonesia and SW Papua New Guinea) are much smaller, approaching C. goffiniana in size. In the few specimens of these small-sized taxa examined, the dark slate-grey colour of the periophthalmic ring and the large size of the ring (22 mm long, 19 mm high, with the eye near the upper rim) distinguishes them from C. goffiniana. C. s. transfreta differs also in the rich cream colour (colour 54 of Smithe, 1975) of the underwing and undertail (pale sulfur yellow in C. goffiniana and C. s. normantoni). It should be noted that Ford (1985) expressed some reservations on the validity of C. s. transfreta, finding no differences from C. s. normantoni other than the underwing and undertail coloration. In addition, he remarked that he had seen a specimen of C. tenuirostris with a similar brownish colour, after the underwing was stained by body fats. We doubt this scenario, as these specimens had been preserved in alcohol initially, which would have removed fats from the body surfaces.

The Solomon Islands Corella, *C. ducorpsii*, is also fairly close, but the head and neck are entirely white, because the reddish pink-coloured feather-bases of head and neck are restricted in extent and not exposed. They are visible only on lore and cheek when the feather-tips are raised, and hard to discern on the remainder of the head and on the neck, as the colour is present only on the extreme bases. The yellow wash of wing and tail is as in *C. goffiniana* and the Australian subspecies of *C. sanguinea*. The periophthalmic ring is circular, approx. 15 mm long and approx. 12 mm high, with the eye about in the centre, as in *C. goffiniana* (see fig. 1). The coloration is different however, being blue-grey, dark even in the skin, whereas *C. goffiniana* has this skin whitish or bluish white. The feathers of the crest are longer and broader, up to 56-65 mm long and 23-28 mm broad. The wing, wing-tip, and tail of *C. ducorpsii* are intermediate in length, between those of the larger subspecies of *C. sanguinea* and *C. goffiniana*, but the bill is heavier and the p10 relatively shorter (see table 1).

Distribution.— Naturally distributed on Pulau Yamdena (e.g. Chayadin, 1993¹) and Pulau Larat (Sclater, 1883b; Hartert, 1901) in Kepulauan Tanimbar, Maluku Tenggara, Indonesia, in the Banda Sea Islands Endemic Bird Area *sensu* Stattersfield et al. (1998). Juniper & Parr (1998) also record it from Pulau Selaru. Van Bemmel (1948)

 $<sup>^{1}</sup>$  The author's name in the context of Cahyadin (1993) is consistently misspelled as "Chayadin".

mentioned two specimens collected in "Tual (Little Kei)" (Tual on Pulau Dullah, Kepulauan Kai), and considered this a probable introduction. However, the species does not seem to have established itself there. Small feral and reproducing populations of *C. goffiniana* currently exist on Puerto Rico and in Singapore (e.g. Pérez-Rivera & Claudio, 1997; Juniper & Parr, 1998).

Natural history and conservation.— Except by Cahyadin (1996), Cahyadin et al. (1994) and Jepson et al. (2001²), little has been recorded on the natural history. *Cacatua goffiniana* is common throughout Pulau Yamdena and found in agricultural lands, disturbed and undisturbed monsoon, semi-evergreen and mangrove forests. The breeding season is said to begin in December and last to February in the rainy season, and the birds probably take three to five years to mature (Cahyadin, 1996). Forshaw (1973) records four eggs to measure  $37.6-39.6 \times 27.8-29.7$  mm. The immature birds form flocks (averaging 23 individuals but up to 300) that are probably the ones venturing into the agricultural fields and feeding mostly on maize cobs. On these farmlands, they were caught to be sold for the pet trade, although the damage to maize crops was not considered a serious problem by locals. The sizeable numbers exported annually did not seem to have had a substantial impact on the healthy appearing population in 1993 (Cahyadin, 1996). At present, there is a ban on trapping implemented, which is largely followed but the underlying reasons for this ban are not understood locally (Jepson et al., 2001).

Under the incorrect name of *Cacatua goffini*, the species is classified as "Lower Risk – near threatened" in the IUCN Red List, and is listed on Appendix 1 of CITES (where all psittaciform taxa have been placed indiscriminately). Surveys in 1993 on Pulau Yamdena, by Cahyadin and party, found this species to be relatively common in high densities, and the total Yamdena population was estimated at approximately 255,000 (± 36,000) individuals (Chayadin, 1993; Cahyadin et al., 1994; and Cahyadin, 1996), and approximately 231,500 (± 33,000) individuals by Jepson et al. (2001).

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<sup>&</sup>lt;sup>2</sup> The surname of the third author, Cahyadin, is misspelled under the title head as "Chayadin", but written correctly on the last two pages.

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<sup>&</sup>lt;sup>3</sup> The date of publication printed is 23 Nov 2000, but apparently the first set of copies were distributed on 18 Dec and subsequent days, when the first author sent copies to colleagues and acquaintances in The Netherlands and abroad. The remainder was probably distributed several months later: for instance, the date of receival stamped on the number in the RMNH library reads 9 Apr 2001.

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## Appendix 1

## Citations pertaining to Cacatua goffiniana spec. nov. from Indonesia (Kepulauan Tanimbar)

Cacatua sanguinea (nec Gould, 1843); Schlegel, 1864: 144 (reference to RMNH 87994 without stating it to be a type specimen of *Lophochroa goffini* Finsch, 1863; and said to be from "Australie"); Schlegel 1866: 319.

Plictolophus Goffini (partim?; nec Finsch, 1863); Finsch, 1867: 308-310 (reference to RMNH 87994 as "in den Zoolog. Gärten von [...] Rotterdam"; the taxonomic allocation of the "Pärchen im Hamburg Zoolog. Garten" remains uncertain).

Cacatua sanguinea (nec Gould, 1843); Schlegel, 1874: 67 (reference to RMNH 87994, mentioned erroneously to be the type of "Lophochroa Goffinii de Finsch").

[Plissolophus sanguineus] Goffini (nec Finsch, 1863); Reichenow, 1881: 26.

Plissolophus [(Camptolophus)] Goffini (nec Finsch, 1863); Reichenow, 1878-1883: unnumbered page in index and page facing "Tafel 33".

"a small white Cockatoo"; Forbes in Sclater, 1883a: 50.

"in all probability Cacatua citrinocristata" (nec Fraser, 1844); Sclater, 1883a: 58.

Cacatua sanguinea (nec Gould, 1843); Sclater, 1883b: 194, 197, 200; Forbes, 1884: 431; Meyer, 1884: 4.

Cacatua Goffini (nec Finsch, 1863); Büttikofer, 1886: 59-60.

? Cacatua Goffini; Von Pelzeln & Von Lorenz, 1888: 40 (reference to a supposed syntype of Lophochroa Goffini Finsch, 1863 in NMW, taxonomic identity remains uncertain).

Cacatua goffini (nec Finsch, 1863); Salvadori, 1889: 27-28; Salvadori, 1891: 129; Hartert, 1901: 165.

Cacatua goffinii (nec Finsch, 1863; an unjustified emendation); Van Balen, 1915: 312.

Ducorpsius goffini (nec Finsch, 1863); Mathews, 1927: 317.

"witte kaketoe's"; Kopstein, 1930: 57.

Kakatoe sanguinea goffini (nec Finsch, 1863); Peters, 1937: 177.

Cacatua sanguinea goffini (nec Finsch, 1863); Van Bemmel, 1948: 371; Forshaw, 1969: 99.

Cacatua goffini (nec Finsch, 1863); Forshaw, 1973: 129; Schodde et al., 1979: 134; White & Bruce, 1986: 212;
Sibley & Monroe, 1990: 112; Andrew, 1992: 21; Jepson in Monk et al., 1997: 446; Juniper & Parr, 1998: 284; Bishop & Brickle, 1999: 131; Brown & Toft, 1999: 149, 151; BirdLife International, 2000: 649.

Cacatua tanimberensis (nec Roselaar & Prins, 2000); Roselaar & Prins, 2000: 104 (reference to RMNH 87994 as holotype of Cacatua tanimberensis, an invalid designation according to Article 72.9 of the Code).

Cacatua goffini(nec Finsch, 1863); BirdLife International, 2001: 2506; Mayr & Diamond, 2001: 379; Dickinson, 2003: 183.

# Citations referring to *Lophochroa goffini* sensu Finsch, 1863 or other taxa, and not pertaining to the Tanimbar Corella

[Lophochroa] Goffini Finsch, 1863: xxiii (syntypes: ZMA 141 and ZMA 142; junior subjective synonym of C. ducorpsii Pucheran, 1853 fide Roselaar & Prins, 2000).

Cacatua Goffinii (an unjustified emendation); Schlegel, 1863: 82 (reference to ZMA 141 and ZMA 142 as aviary specimens in 'Natura Artis Magistra' and he speculated that they were "waarschijnlijk van de Papoe-eilanden"; C. ducorpsii was referred to here).

Plictolophus Goffini (partim?; nec Finsch, 1863); Finsch, 1867: 308-310 (reference to ZMA 141 and 142 as aviary specimens in "Artis"; the taxonomic allocation of the "Pärchen im Hamburg Zoolog. Garten" remains uncertain).

Cacatua goffini; Sclater in Anonymous, 1869: 645 (a specimen first identified by Sclater as goffini, but lateron designated by him as holotype of *C. gymnopis* Sclater, 1871: 493).

? [Licmetis] Goffini; Gray, 1870: 170 ("Solomon I."; it is likely that C. ducorpsii was referred to).

- Cacatua goffini; Sclater, 1875: 60-61, plate X (a specimen, illustrated on plate X, purportedly shot at "Coomara in Queensland, about 30 miles from Brisbane" and three additional live specimens in the London Zoo, without stated locality data; strangily, the illustrated "Coomara" bird does not conform to C. sanguinea gymnopis, as would be expected from the locality data, but rather C. ducorpsii, based on loral and head feathers pigmentation, the periophthalmic ring colour and its outline).
- ? Cacatua goffini; Tristram, 1882: 143 ("[Solomon Islands]"; it is likely that C. ducorpsii was referred to).
- ? Cacatua Goffini; Von Pelzeln & Von Lorenz, 1888: 40 (reference to a supposed syntype of Lophochroa Goffini Finsch, 1863 in NMW; taxonomic identity remains uncertain).
- Cacatua tanimberensis Roselaar & Prins, 2000: 104 (syntypes: ZMA 141 and ZMA 142, according to Article 72.9 of the Code). New junior subjective synonym of Cacatua ducorpsii Pucheran, 1853, and junior objective synonym of Lophochroa goffini Finsch, 1863.