BIRDS OF NOKOPO by Christin Kocher Schmid

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Preface and acknowledgments

In 1986-87 I conducted anthropological field research at Nokopo village in the Finisterre range, working mainly on plant-people interactions. Birds were often mentioned by informants while they reported plant uses and plant taxonomy. I duly noted the birds' designations, habits and pecularities, which seemed to be a constant source of discussion and delight to Nokopo men. After June 1987, however, I began to systematically gather data on birds, encouraged and stimulated by the book "Birds of New Guinea", which was sent to me by Mike Hopkins and which proved to be a major attraction in the village. In 1988 I returned for two months to complete my data, not only on plant use but also on concepts about birds. Finally in 1991-92, I lived for another six months in the same area to assist in setting up a cultural centre. During this period it was possible to complete the information from Nokopo with data from other villages. However, the following ornithological data is based on the Nokopo knowledge of birds. Additional information from other villages is only cited to confirm a point Nokopo informants made, for instance on habits or food preferences. Bird taxonomies differ from village to village, and to present them all would be more confusing than helpful.

I remain deeply impressed by the range and quality of the detailed knowledge anthropological interpretations, although this was tempting, because birds play such an important role in Yopno culture and society. However, some interpretative remarks were included in an earlier publication on plant-people interactions (Kocher Schmid 1991) and others are included in chapters 5 and 6 of this publication.

At Nokopo the following men systematically discussed birds with me: Mr. Yangere, lineage Gata; Mr. Yamet, lineage Yamek; Mr. Sendi and Mr. Noheyu, both lineage Bram; from Mek village Mr. Botinuwe, Meko lineage and from Taeng village Mr. Bosinu, Davevel lineage contributed. Hunting methods were demonstrated and explained to me by Mr. Gawat, lineage Memnda and Mr. Musoka, lineage Gata both from Nokopo village. Mr. Totonu, lineage Bram and Mr. Tawal, lineage Salsal both from Nokopo village and Mr. Tamekwon, lineage Gabangon from Maom village gave valuable background information. The Swiss Academy of the Humanities and the Swiss Society for Garden Culture generously funded my field research in 1986-88 and 1991-92 respectively.

Plants were identified by the following scientists (listed in alphabetical order): Mr. P. Bakker, CSIRO Brisbane; Dr. C. Farron, University of Basel; Dr. B.P.M. Hyland, CSIRO Atherton; Dr. M. Jebb, CRI Madang; Mr. P. Katik, Department of Forestry Lae; Dr. D.P.A. Sands, CSIRO Brisbane; Prof. Dr. G. Stocker Unitech Lae. However, any faults or misinterpretations are mine.

1. Introduction to Nokopo

Nokopo is a small community in the Finisterre Mountains of the Huon Peninsula on the northcoast of Papua New Guinea. It is situated high up on a mountain shoulder in a small side valley of the Yupna River which flows to the Bismarck Sea. The area is rugged, surrounded by gorges and steep mountains with the coast some two days hard walking distance to the north. The only "modern" access is an airstrip at Teptep ten kilometres from Nokopo village by walking track.
Nokopo village is part of the Yopno language and culture group, occupying the middle and higher reachers of the Yupna river in both the Madang and Morobe provinces. This marginal situation together with the rugged character of the terrain is largely responsible for the remoteness of the region.

The village territory is divided into two distinct zones by a small tributary to the Yupna River. The garden and grassland zone, called onan by Nokopo people, comprises carefully tended garden plots on stabilized grassland as well as the main settlement, at an altitude of 2000 m ASL. This zone is considered the warmer part of the territory, its lower sections towards the edge of the Yupna gorge being sufficiently warm to carry such crops as marita-type pandanus, pineapple, and pawpaw. In the wet season the main settlement is the hub of social life, every nuclear family occupys its respective house and proceeds daily to their gardens.

The forest zone, called koron, has quite different characteristics, it is considered to be colder and more distinctive. Every family has, besides their house in the main settlement, a forest house where they live most of the time in the dry season. These forest houses are scattered, some situated quite close to the main settlement in secondary regrowth as well as some built far off in the primary forest. During the driest months of the year (Jun/July), the small gardens near the forest houses still yield a fair amount of taro and english potatoes, and wild food, especially fern fronds, are collected easily by the women.

There are three generally recognized forest zones, that is forest types, characterized by Nokopo people by the presence (including the abundance) or absence of different plants:
- Koron ngangal. "warm forest",
- Koron si. "true forest", or koron kaum, "cold forest", or kiyang
- Koron. "nut pandan forest". These designations are synonyms, and
- Kapap (no etymology obtained)

These three Nokopo forest types are comparable with western scientific classifications of forest. While there are different systems of nomenclature for the classification of New Guinea forest, (e.g. Johns 1976 and 1982, and Paijmans 1975 and 1976), such classifications essentially agree. They also agree with the system of forest classification by Nokopo people.

Koron ngangal
The warm forest type is found on the main forest slope facing southwest and south to an altitude of about 1900 m. Nokopo warm forest is characterized by three frequently-occurring and emergent tree species: moom (*Dacrycarpus sp.*), danyit kok (unident.) and nomep (*Lithocarpus brassii*). Figs are frequent sub-canopy trees and lowland species (e.g. *Sloanea forbesii*, kinamen) occur. Trees with large girdles and buttress roots are frequent. Gingers and peppers are abundant and palms, dsopang (*Heterospathe sp.*) are common. Ground-ferns are present, tree-ferns absent, and epiphytic bird's nest-ferns are common. Two species of wild pandans, ariri, of oil pandan-like appearance ("marita"), and dsaal, of nut pandan-like appearance ("karuka"), occur only in this forest type. In the lower sections of this forest (below about 1600 m), several plant species occur which do not grow elsewhere on Nokopo territory and these are used by Nokopo people for special, mainly ritual, purposes (e.g. the epiphytic ant-plant *Myrmecodia*

schlechteri and the pepper shrub *Piper wichmannii*).

The koron ngangal of Nokopo is in accordance with Paijmans' higher levels of the "medium-crowned lowland hill forest" (1976:65), and with John's "lower montane forest" (1976: 110-111) with some "mixed lowland rainforest" aspects (1982: 314-16). Thus, this forest clearly belongs to the transition zone between lowland and montane forest. I will refer to the koron ngangal as Lower Montane Forest (LMF).
At warmer sites of the LMF, where the two wild pandans and the palm (*Heterospathe sp.*) already described grow especially abundantly, they are associated with *Podocarpus neriifolium*, a fig, *Ficus* gul and the tree, kupnut (probably in the *Guttiferae* and occuring in larger numbers only further down the Yupna valley). I will refer the term "warm LMF" to this forest.

Koron si (koron kaum, kiyang koron)
Nokopo "real forest" is found on southwest as well as northeast-facing slopes above about 2000 m and extends up to the structural limestone plateau (Loffler 1974:11), adjacent to the Yupna River system to about 2600 or 2700 m.
The canopy of the real forest is characterized by several fig species, which are less abundant than in the LMF. The thorny, strong-smelling tree, kel (*Zanthoxylum conspersipunctatum*), is a characteristic element. The *Dacrycarpus sp.* characteristic of the LMF (moom) occasionally occurs as an emergent and high altitude trees (probably *Podocarpus pilgeri* or *brassii*). Most trees have small girdles, and buttress roots are rare. Most pandans are planted by people and rarely occur naturally. Gingers and peppers of the LMF are present but no species occurs abundantly. The herbaceous ground cover is characterized by large wild taros (*Alocasia macrorrhizos*), and scrambling bamboos (unident.) are common. Several climbers are confined to this forest type (e.g. a *Stephania sp.*, an *Aristolochia sp.*, or a red flowering *Dimorphanthera spp.*, *Bulbophyllum spp.*, *Liparis spp.*, *Oberonia spp.* and others) and other epiphytes (e.g. tassel ferns, *Lycopodium squarrosum*). Nokopo koron si "real forest" is roughly in accordance with Paijmans' "lower montane forest" (1975:14-15, 1976:85-86) and with John's "mixed mid-montane forest" (1976:112 and 1982: 324-25). I will refer to this forest type as Lower Mid-montane Forest (LMMF).

Kapap
The term kapap is used ambiguously: It is applied to refer to the upper, less-disturbed levels of the LMMF (2200 m and higher), as well as to another forest type which does not occur on Nokopo territory. This type is only found further up the Yupna valley from an altitude of about 2500/2700 m to the tree limit at about 3400 m, but it is known to Nokopo people. It is very cold and wet.

The canopy of the kapap is dominated by the trees gang moom (*Dacrycarpus compactus*) and kaloe kwak (probably *Podocarpus pilgeri* or *brassii*), and guoman (*Bubbia sp.*) which is already present in Nokopo "real forest". Wild nut pandans (*Pandanus brosimos* and probably other *Pandanus spp.*) grow abundantly. Other trees mainly found here include kwat (*Libocedrus sp.*), kapapda (*Acronychia sp.*), a *Dendrocnide sp.* as well as several *Ericaceae*. Tree-ferns are uncommon but ground ferns are present. Two gingers (*Alpinia conglomerata* and *Alpinia* cf *peekelii*) are present and scrambling bamboos are common. The trees are covered by thick layers of epiphytic moss. Several plant species which are highly valued by Nokopo people for different purposes only grow here, for instance a climbing pandan (*Freycinetia sp.*) -- considered the standard material for fibre skirts, and two *Dendrobium spp.* used for ornaments.

Kapap may be equated with Paijmans' "coniferous lower montane forest" (1975:16, 1976:91) or "elfin

woodland" (1975:15, 1976:88) and with John's "mid-montane forest" (1976:112, 1982:324-25), cf. also Paijmans' vegetation map (1975). I will refer the term Upper Mid-montane Forest (UMMF) to this forest type.

In the text and in tables the following abbreviations referring to the habitat of plants and animals discussed are used:

U Ubiquitous, occurring in grassland as well as in forest and over a wide altitudinal range.
G Restricted to lowland hill forest (as defined by Paijmans 1975).
MF Occurring in montane forest and over a wide altidudinal range.
LMF Occurring mainly in Lower Montane Forest.
MMF Occurring in Lower as well as in Upper Mid-montane Forest.
LMMF Occurring mainly in Lower Mid-montane Forest.
UM Restricted to or mainly occurring in Upper Mid-montane Forest.
cult. foreign or exotic plants cultivated by Nokopo people.

2. Checklist of Nokopo birds

The following checklist is not arranged according to Nokopo bird taxonomy but follows the chapters of Beehler et al. 1986. Within the single subheadings, description follows Nokopo conceptions.

2.1 Brush-turkeys and quail

2.1.1 Brush-turkeys are called toa, and the two species are distinguished by their size and by the colour of their eggs: toa kwak (*Talegalla jobiensis*), the Brown-collared Brush-turkey, is a larger bird with white eggs; toa pamteng (*Aepypodius arfakius*), the Wattled Brush-turkey, is a smaller bird with yellowish-reddish eggs. Both species build breeding-mounds from fallen leaves on the forest floor. Nokopo people call these mounds melak, a term which they apply to any mound constructed by animals or people. This term is also applied to the sweet potato-mounds in their gardens. Brush-turkey are said to raid taro gardens in the forest and are therefore trapped there by devices called kosit (path) paat (trap).

Formerly brush-turkeys (toa) were common in Nokopo LMMF and LMF. Today they only breed on the steep slopes of LMF towards the Yupna gorge and the Mopetatnyi tributary, where domestic pigs are not active. Brush-turkeys and quail are highly valued by Nokopo people for their meat, and the eggs of brush-turkeys are eagerly collected. By over-collecting eggs and destroying breeding-mounds, Nokopo people have considerably reduced the brush-turkey population on their territory.

2.1.2 Quail are called pulu, and Nokopo people distinguish two species according to the size of the bird and its voice. The larger, is pulu madep (*Coturnix australis*), Brown Quail and the smaller is pulu mondsin (*Coturnix chinensis*), King Quail. This latter bird is also called dsikwamen (sik: to laugh, amen: man) because its voice is said to resemble human laughter. In the higher lying villages of the Daaldaal valley quail are, together with Richard's Pipit (*Anthus richardi*), subsumed under the term dsong (grassland) menaam (birds). Quail mainly inhabit the grasslands of this valley and are only rarely found in the Mopetatnyi valley. Richard's Pipit is restricted to the Daaldaal valley (cf. 2.12).

Both quail feed on insects and the seeds of weeds, especially on the seeds of piyam (*Polygonum nepalense*) and ponga (*Solanum nigrum*). Nokopo informants further reported pulu madep (*Coturnix australis*) to feed on fungi. They are eagerly hunted with bow and arrow but rarely hit as they often fly up

unexpectedly from the grass concealing them.

2.2 Waterfowl

Waterfowl are very rare on Nokopo territory. Occasionally ducks or geese are met along the Yupna river and along its tributeries Mopetatnyi and Brak. Nokopo people use the general term yirum to refer to small waterfowl, but do not distinguish genera and species from each other.

2.3 Diurnal raptors

Diurnal raptors are rarely seen and hunted at Nokopo. Informants showed considerable inconsistency when asked to identify them. There are four designations referring to diurnal raptors, three of them are considered to be closely linked to each other:

2.3.1. Tovat is a large, dark-coloured and rare eagle or buzzard, which is said to reside only farther down the Yupna valley and only occasionally to visit higher lying areas. The term tovat means "spread-out".
2.3.2. Karanoknok is smaller than tovat. It is a smaller eagle or a large goshawk and said to occur frequently on Nokopo territory.
2.3.3. Baina is the smallest of the three closely linked raptors and is occasionally seen in the warmer sections of Nokopo territory towards the Yupna gorge. It is most probably a small goshawk.
2.3.4. Ko is a common goshawk, informants identified it alternatingly Chestnut-shouldered or as Meyer's Goshawk (*Accipiter buergersi* or *A. meyerianus*). One informant referred to immature goshawks as ko mondsin, small ko which he claimed to occur close to the village.

2.4 Rails

One rail was clearly identified by informants as Forbes' Forest-rail (*Rallina forbesi*). Its local name, kungak, is probably onomatopoeic. Rails are said to feed on various invertebrates and vertebrates, including fledglings of other bird species. The nest is built on trees as well as on the ground in Nokopo LMMF and UMMF. Rails are shot with bow and arrows.

To kungak, another, unidentified bird, is attached by name to its habitat: wung (sword grass) kungak. It is an insectivorous, ground-dwelling bird living in sword grass-dominated grassland. Nokopo informants identified it as godwit or snipe, migrants restricted to swampy or coastal areas. However, the similar-looking Common Sandpiper (*Tringa hypoleucos*) is known to winter in open habitats in upland regions (Beehler, et al. 1986:85).

2.5 Doves and pigeons

All doves and pigeons are valued prey to Nokopo hunters as they yield much tender, fat meat.
2.5.1. Yoyo are nomadic fruit-doves and pigeons migrating to Nokopo territory from lower altitudes to feed on the fruits of sam (unident., LMF), ivat (*Platea sp.*, MF), kombe (*Galbulimima belgraveana*, LMMF and sometimes LMF), beldadat (unident., MF) and occasionally mangpak (*Ficus sterrocarpa*, LMF) during the wet season (January). Yoyo include *Ptilinopus coronulatus, P. ornatus, P. perlatus, P. namus, P. iozonus, P. superbus, P. pulchellus, Ducula rufigaster, D. pinon, D. muelleri* and *D. zoeae*.

2.5.2. The resident fruit-doves and imperial pigeons are designated with seperate names.

2.5.2.1 Kanaarem: *Ducula chalconata*, Rufescent Imperial Pigeon (sometimes also applied to *Ptilinopus magnificus*, Wompoo Fruit-dove). One man distinguished apart from kanaarem, two additional subtaxa. Kanaarem madep, (*Henicophaps albifrons*, New Guinea Bronzewing), is said to normally reside at lower

altitudes and to migrate like the yoyo-group to feed on the fruit of sam, ivat and beldadat; kanaarem mondsin (*Chalcophaps indica*, Emerald Ground-dove) is said to be indigenous to Nokopo territory. This view is supported by informations from another village (Mek) of the other river bank, where the Emerald Ground-dove is not subsumed under the term kanaarem but designated with the separate term woveng

2.5.2.2 Gemat is the term used to designate *Ptilinopus rivoli*, the White-breasted Fruit-dove. Gemat and kaarem are considered to constitute a closely related pair because they share the same food habits, both yield fat meat, their feathers are unsuited for ornaments and the same techniques are used to hunt them. They are mainly distinguished from each other by size: gemat is smaller than kanaarem.

2.5.2.3 Yoyo also designates *Gymnophaps albertisii*. The term yoyo is used as a general term for nomadic fruit-doves and pigeons (cf. before) and also refers to the resident Papuan Mountain Pigeon. All these birds are considered to be closely related to each other, as they feed on the same range of trees.

Cuckoo-doves and ground-doves, described below, are considered to be unrelated to the other doves and to pigeons. They are also considered to be unrelated to each other.

2.5.3 Pikwi, *Reinwardtoena reinwardtii*, feeds on the fruit of several *Schefflera spp.* and of an unidentified *Freycinetia sp.*, all of which are indigenous to Nokopo LMMF. When these plants bear an abundance of ripe fruits, the cultivated and forest nut pandans are also ready to harvest. The frequent calls of the Great Cuckoo-doves thus serve as an ecological indicator for Nokopo people to move to their forest houses to gather the ripe pandan fruits. The calls are in the neighbouring Nankina valley are interpreted as "yirkno yirkno", meaning "my stringbag, my stringbag" indicating that stringbags can now be filled with pandan-nuts. Great Cuckoo-doves are trapped at one of their food-plants, a *Freycinetia sp.* called kamam.

2.5.4. Baol, *Macropygia nigrirostris* (and *M. amboinensis*), are inhabitants of mid-montane forest and disturbed habitats containing *Carpodetus sp.*, ? *Litsea sp.*, Schefflera *spp.*, *Freycinetia sp.* and *Solanum nigrum*.

2.5.5. Dakwat refers to *Gallicolumba beccarii*. The Bronze Ground-dove is linked by name to MacGregor's Bowerbird (*Amblyornis macgregoriae*) and to Wahnes' Parotia (*Parotia wahnesi*), both of which are sometimes subsumed under the term dakwalova (cf. 2.25). Nokopo people did not explain this relationship. However, the Bronze Ground-dove is reported to visit parotia display grounds (Beehler et al. 1986:103). On the other hand, dakwat may be considered to be related to pulu and dsikwamen, two grassland quails, on the notion that all these birds are ground dwelling.

About the habits of dakwat-doves, Nokopo people reported several details: the nest is built from small vines on young nut pandans (*Pandanus brosimos/jiulianettii*) of LMMF about 20-30 cm above the ground. Later the fledglings are reported to be dragged to the ground by the adult birds. Dakwat-doves mainly feed on fallen fruits of the trees dsua dsua (unident.) and dsimbe (*Rutaceae*), trees occurring in all forest areas, and gurung (*Homolanthus novoguineensis*) of MMF. Thus, according to these reported habits, Bronze Ground-doves inhabit Nokopo LMMF. The birds also take insects and scrapings of a soft rock called kapup occurring in small creeks and rivulets.

2.6 Parrots, lories, lorikeets and cockatoos

2.6.1. The parrots susum (*Alisterus chloropterus*), tengaak (*Eclectus roratus*) and kanek (*Micropsitta*

bruijnii and *Psittacella modesta* or *P. madaraszi*) are considered to be closely related to each other. They alternately form two related pairs.

Susum and tengaak are differentiated by their habitat: susum occurs on Nokopo territory, it is a koron menaam (montane forest bird), whereas tengaak is only found farther down the valley, it is a tale menaam (bird of the warmer areas). Susum and kanek share their Nokopo habitat and their diet but differ in size: susum is larger than kanek. Some Nokopo informants included the Black-capped Lory (*Lorius lory*) in their use of the terms tengaak and susum. Birds which are not indigenous to Nokopo territory but known to Nokopo people from adjacent areas are often ambiguously attached to the local taxonomic system. In the case of the Black-capped Lory, it is designated as susum when referring to its colour and as tengaak when referring to its habitat.

2.6.1.1. Tengaak, the Eclectus Parrot, is said to occur up to an altitude of about 800m and to feed on bananas, small coconuts and *Canarium* nuts. Its feathers are used for body ornaments. Skins are bought from the villages of the lower section of the Yupna valley for seven to eight Kina apiece.

2.6.1.2. Susum, the Papuan King-parrot, is reported to feed on the fruits of the trees misol (*Dodonaea viscosa*, U), gep (*Ficus calopilina*, MMF) and kwadat (*Ficus itoana*, LMF and also MF) and on fruits of the vines esal (*Elaeagnus sp.* and *Alangium biflora*, LMF). This parrot is only seen when these fruit are ripe, that is in the wet season from about October to April. Susum-parrots are very hard to shoot but their feathers are highly cherished for ornaments (cf. chapter 4).

2.6.1.3. Kanek: this small parrot was identified by most informants as the Modest Tiger-parrot (*Psittacella modesta*). However, according to the reported habits, it is instead a pygmy-parrot (*Micropsitta bruijnii*). It seems that all small, red-bellied parrots are subsumed under the term kanek and only men above the age of about 40 years, identified the bird at all. They reported kanek to feed from the fruit of gep (*Ficus calopilina*, MMF), kwadat (*Ficus itoana*, MF) and kamam (*Freycinetia sp.*, LMMF). Insects (pidgin "binatang"), kanek dsaap ("food of the Pymy-parrot"), are also taken and the bird is reported to build its nest into the mounds which are attached to trees. These habits are reported elsewhere (Beehler et al. 1968:118, and Hyndman and Frodin 1984:119) for Pygmy-parrots but not for Tiger-parrots. The insects concerned are most probably termites. Nokopo people call the mounds bunggung, which means "porous" and consider them to be related to the epiphytic ant-plant bumum (*Myrmecodia*) of LMF.

2.6.2 Lorikeets are subsumed under the term sungu. This term is also used to refer exclusively to the Papuan Lorikeet (*Charmosyna papou*). The term mit mit is used to designate all smaller lorikeets within the category sungu. However, it is also used to refer exclusively to Yellow-billed Lorikeets (*Neopsittacus musschenbroekii*). The designation dap dap which is included in the above mentioned hierarchical categories, refers to even smaller lorikeets. Goldie's Lorikeets (*Trichoglossus goldiei*), Pygmy Lorikeets, (*Charmosyna wilhelminae*) and Plum-faced Lorikeets (*Oreopsittacus arfaki*). That means that all dap dap can also be called mit mit, and all mit mit may be also designated as sungu.

The term sungu used in the restricted sense and referring to the Papuan Lorikeet, may be subdivided in sungu gaman and sungu pelin, that is red sungu and black sungu respectively, denoting the two colour phases of this bird. Beehler et al. (1986) report that black phase of the Papuan Lorikeet is absent from the Huon Peninsula; however, Nokopo people insist on the occasional occurence of dark coloured individuals and have given these a pivotal position in their belief-system.

The same range of foodplants is reported for sungu and mit mit. Dap dap are said to feed on a different range of plants:

Table 1. Food plants of lorikeets

Sungu & mit mit	Dap dap	Identification	Habitat
mata	mata	*Pittosporum ?ramiflorum*	MF
dsamben	-	*Rubiaceae*	MF
tepma	tepma	*Schefflera spp*	MF
dsotal	-	*Alpinia spp. Nicolaia elatior*	MF
gep	-	*Ficus calopilina*	MMF
-	kwawa	*Dimorphanthera sp.*	LMMF
-	sipkwadat	-	MMF
-	dsimbe	*?Rutaceae*	MF
-	eletem	*Macaranga sp.*	LMF

All kinds of lorikeets, sungu, mit mit and dap dap, are trapped with birdlime at flowering mata-trees (*Pittosporum ?ramiflorum*). Sungu and mit mit can also be trapped at three of their food plants: dsotal (*Alpinia spp.* and *Nicolaia elatior*) and tepma (*Schefflera spp.*). For dap dap no trapping was reported.

Three especially large and distinct taxa, one parrot and two cockatoos, are considered distinct, unrelated to each other or to other birds: dsakwo (*Psittrichas fulgidus*), gokek (*Cacatua galerita*) and saoreng (*Probosciger atterrimus*). These birds were identified by all informants unambigously and without hesitation.

2.6.3. Dsakwo, the Vulturine Parrot is a very important bird in Nokopo culture. From its feathers the highest rated feather-wheels are assembled and in a neighbouring village one clan considers the bird to be an ancestor. The bird is extinct on Nokopo territory but its feeding habits are well known to Nokopo men. The most important food plant for Vulturine Parrots is said to be a *Freycinetia sp.* with bright orange-red, fleshy bracts called dubit. In former times, specially treated traps were built around the inflorescences of these plants which grow at Nokopo exclusively in LMF. The bird is further reported to feed on the figs of mangpak (*Ficus sterrocarpa*), also a tree of Nokopo LMF and to visit licking sites created by sugargliders. There it is trapped by special devices called asep asep (licking site) paat (trap). Over-hunting with shotguns has rendered the Vulturine Parrot extinct on Nokopo territory. This over-hunting was triggered by visits from people from the Highlands who, even ten years ago, paid up to 50 Kina per skin. Older men remembered that, before the establishing of an airstrip in the area (1972), groups of Highlanders walked in from the Markham valley. Later they came by air. Nokopo people know that Highland people use Vulturine Parrot skins for bride price.

The bird has never been abundant in the Yupna valley, being confined to the warmer areas but also in great demand in the higher lying villages. A feather-wheel requires the feathers of ten birds, and ideally each young man should be given such a wheel by his fathers when he participates for the first time in the distinct night dances connected with this wheel. Mek, Donatum have established quotas for the hunting of Vulturine Parrots, and have thus preserved their dsakwo-populations. (The Vulturine Parrot is rare in Papua New Guinea, feathers and skins are bought and sold on a black market, Beehler et al. 1986:35).

2.6.4 Gogek (*Cacatua galerita*) is also extinct in Nokopo territory. The bird was cherished for its ornamental feathers and was shot in gardens whenever observed as it fed on garden crops such as bananas, beans, sweet potato and pawpaw in addition to a range of forest fruits. Nokopo people reported that in former times they constructed scare-crows from sword grass to keep Sulphur-crested Cockatoos away from their gardens. Its feathers are also used for feather-wheels, either as single rows separating the rows of Vulturine Parrot feathers, or intermixed with these feathers (cf chapter 4).

2.6.5. Saoreng (*Probosciger aterrimus*) occurs only below an altitude of about 800m; however it is well-known to Nokopo people and its feathers are also used for feather-wheels. Palm Cockatoos are reported to feed on the fruits of *Canarium ?indicum*, and *?Intsia bijuga*. Neither tree grows in Nokopo territory, but their products (*Canarium* nuts and timber) are imported. Nokopo people report that Palm Cockatoos sleep in distinct trees which are easily recognized by the faeces these birds let drop onto the ground. Hunters lure at night at these trees and shoot the palm cockatoos with bow and arrows.

2.7. Cuckoos and koels

Cuckoos and koels are subsumed under the general terms trerut or yarurum. Informants applied these designations to *Cacomantis variolosus*, *C. castaneiventris*, *C. flabelliformis* and to *Caliechthrus leucolophus* (Brush, Chestnut-breasted and Fan-tailed Cuckoos, and White-crowned Koel). A killed individual shown to me was clearly a Fan-tailed Cuckoo (*Cacomantis flabelliformis*).

Nokopo people report that scrub-wrens (*Sericornis*) darek (cf. 2.16.3) are hosts for trerut-cuckoos. Female darek are said to produce cuckoos and scrub-wrens alternately, that is they are said to mate with both males; while the female cuckoo is considered sterile (cf. also Beehler et al. 1986: 125).

2.8 Owls and nightjars

Nokopo people have one term to refer to nocturnal birds, pelin kaa menaam (darkness/grove/birds) and distinguish six of them from each other, two of these taxa are considered to be linked to each other.

2.8.1. Balum (*Tyto tenebricosa*), the Sooty Owl, is reported to feed on rodents and marsupials. It only occurs far away from human settlements and activities, well in UMMF. It is rarely taken, as it can only by chance be surprised while feeding at its prey. If hit by an arrow, it is said to often fly away with the arrow. Wing-feathers of Sooty Owls are highly valued components for feather-wheels (cf. chapter 4).

2.8.2. Balum balum is linked by name to the Sooty Owl and considered a smaller relative. The name refers to two different nightjars, the Large-tailed Nightjar, *Caprimulgus macrurus* and the Mountain Nightjar, *Eurostopodus archboldi*). Balum balum - nightjars feed on insects, and as Nokopo informants tell, especially on crickets. They occur in the grassland near the main settlement as well as far away in the forest (UMMF) but they are not common at Nokopo.

2.8.3. Singkwak was identified as the Grass Owl (*Tyto capensis*). It is a rare bird, reported to feed mainly on rodents.

2.8.4. Gengaarat, the Rufous Owl (*Ninox rufa*), is also reported to feed mainly on rodents but also on insects. It nests in tree or rock cavities. Nokopo hunters beset it during the day, rather than attempting to shoot it at night. It is a common bird at Nokopo.

2.8.5. Gwaok is a general, onomatopoeic term referring to frogmouths and owlet-nightjars. Frogmouths (*Podargus spp.*) are called gwaok madep (large gwaok) and owlet-nightjars (*Aegotheles spp.*, probably

only *Ae. albertisi*, the Mountain Owlet-nightjar) gwaok mondsin (small gwaok). Both kinds of gwaok are common at Nokopo and are occasionally shot with bow and arrows while night-hunting for marsupials.

2.8.6. Num num is also an onomatopoeic name and refers to the rare Rufous Woodcock (*Scolopax saturata*). The bird occurs in Nokopo LMMF and UMMF and is occasionally taken by bow and arrows.

2.9 Swifts and swiftlets

Glossy Swiftlets (*Collocalia esculenta*) are very common at Nokopo. They are called kalasip. Sometimes they are called kalasip mondsin (small kalasip to distinguish them from the rarer Tree-swifts (*Hemiprocne mystacea*) and probably from migratory swifts, which are both called kalasip madep (large kalasip). Occasionally visiting Pacific Swallows (*Hirundo tahitica*) are also designated as kalasip madep.
Nokopo people have developed a special hunting technique to kill Glossy Swiftlets (cf. chapter 3), because these animals are very fast moving. The birds nest in rock cavities, under screw-pine leaves and in deserted houses, their nest is said to be built from beard-moss (*Usnea sp.*)

2.10 Kingfishers

Forest and Sacred Kingfishers (*Halycon macleayii* and *H. sancta*) are called domo (nose, beak) long (long). They are rare at Nokopo and only occasionally seen in the forested areas.

2.11 Hornbills

Blyth's Hornbill (*Rhyticeros plicatus*) only occurs in the lower section of the Yupna valley below an altitude of about 600 m. Nokopo people call this bird kangare (*Carinarium ?indicum*) putok (to break open) according to its favourite food. The bird is depicted on dance boards and mentioned in stories (cf. chapter 6).

2.12. Wagtails and pipits

The two taxa included in this heading are considered to be unrelated to each other by Nokopo people.

2.12.1. Bindsindsim was identified as the Grey Wagtail (*Motacilla cinerea*). It is hunted with bow and arrows and its feathers used for dance ornaments. The bird is common everywhere on Nokopo territory. Nokopo people designate one of their pulse cultivars with the same term.

2.12.2. Dsirikpelit, or Richard's Pipit (*Anthus novaeseelandiae*), is restricted to the grasslands of the adjacent Daaldaal side-valley at altitudes of about 2000 - 2150 m. It may be hunted with bow and arrow. People of the the Daaldaal valley subsume it together with quail under the term dsong (grassland) menaam (birds).

2.13 Cuckoo-shrikes and shrikes

2.13.1. The designation lebleb was referred to Stout-billed and Boyer's Cuckoo-shrikes (*Coracina caeruleogrisea* and *C. boyeri*). These birds are met frequently everywhere in Nokopo territory.

2.13.2. Kwidnaak (*Lanius schach*), the Long-tailed Shrike, is also frequently seen everywhere in Nokopo territory. It is a highly valued quarry as it is said to yield fat and tender meat. On this basis it is sometimes linked to Bronze Ground-doves, dakwat. Nokopo people have designed various devices and ways to catch Long-tailed Shrikes (cf. chapter 3). Kwidnaak feed on insects and small skinks and are renowned for mimicking the voices of other birds and also of people.

2.14. Thrushes

2.14.1. Nyingwaol (*Saxicola caprata*), the Pied Chat, is reported to feed mainly on a distinct kind of worm (?) called woling; however, *Zeuxine* sp, a ground orchid, is designated as nyingwaol dsaap, "food of the Pied Chat".

2.14.2. Scaly Thrushes and Island Thrushes (*Zoothera dauma* and *Turdus poliocephalus*) are sometimes referred to as dep gaman ("red head"). However, these birds do not have red head patches like the Rufous Naped Whistler to which the designation originally refers (cf. section 19.2 in this chapter).

2.15. Babblers and melampittas

2.15.1. Jewel-babblers (*Ptilorrhoa spp.* probably only *P. leucosticta*, the Spotted Jewel-babbler) were designated as yaalsapsap and said to occur frequently in Nokopo forested areas. They are taken by various devices built by Nokopo hunters.

2.15.2. Wikat was unambiguously identified by all informants as the Lesser Melampitta (*Melampitta lugubris*). The bird is taken using the same devices as for jewel-babblers and inhabits the same areas. Wikat plays a role in the mythology of one lineage of Nokopo (cf. chapter 6).

2.16. Warblers and fairy-wrens

The taxa listed here are considered to be unrelated to each other, except that they belong to an unnamed category of small insectivorous birds which include also other taxa not included in the scientific conception of this category.

2.16.1. The term dsingndet is ambiguously used: it may refer to Black Monarchs (cf. section 2.17) and it is also used as a general term for fairy-wrens. Nokopo informants report a number of differently coloured fairy-wrens living in Nokopo LMMF and do not distinguish them from each other.

2.16.2. The White-shouldered Fairy-wren (*Malurus alboscapulatus*) is not included in the above described general term for fairy-wrens but is referred to with the separate designation, pisisirip. The term was also applied to other white-shouldered birds such as the Torrent-lark (*Grallina bruijni*).

2.16.3. The term darek is generally applied to scrub-wrens (*Sericornis spp.*) and to mouse-warblers (*Crateroscelis spp.*). They are common in all areas of Nokopo territory and are taken by building traps around their nests. (Mouse-warblers and scrub-wrens build the same type of nest, Beehler et al. 1986:162.). Mouse-warblers (probably only Mountain Mouse-warblers, *Crateroscelis robusta*) are sometimes designated with the designated with the expression darek bam (fat darek) to distinguish them from the slimmer scrub-wrens.

2.16.4. Gworek are small grassland birds. They were identified by informants as Tawny Grassbird (*Megalurus timoriensis*) and Golden-headed Cisticola (*Cisticola exilis*). Another term also used for both, nawa (a kind of grass) menaam (bird), refers to the habitat of these birds.

2.16.5. One informant used the term pelesigut to refer to Island Leaf-warblers (*Phylloscopus trivirgatus*) but gave no further information on this bird.

2.17 Fantails and monarchs

Sometimes the designations for different fantail species are confused with each other. However, the majority of informants used them as follows:

2.17.1. Silek refers to Dimorphic and to Black fantails (*Rhipidura brachyrhyncha* and *R. atra*). Silek gaman ("red fantail") and silek kwak ("white fantail") denote the two colour phases of Dimorphic fantails. The term silek pelin ("dark fantail") only refers to Black Fantails.

2.17.2. Singtul is used to designate Friendly Fantails (*Rhipidura albolimbata*). Silek-fantails are taken using various means, singtul-fantails are only killed with bow and arrows.

2.17.3. Black Monarchs (*Monarcha axillaris*) are called dsingndet and taken in LMMF using various devices.

2.17.4. Talabusit was by all informants identified as the Black-breasted Boatbill (*Machaerirhynchus nigripectus*). The bird is said not only to feed on insects but also on fruits or seeds of several unidentified forest trees of LMMF. The term talabusit refers also to a vine (*Pandorea sp.*): the wing-pattern of the bird is considered to resemble the vine's stem-pattern. In another Yopno village (Mek) the Black-breasted Boatbill is alternately called walap yamang kwen kakak, literally: "He shot the cassowary and then fled upwards." This is an allusion to the first story reported in chapter 6: at Nokopo the cassowary was cheated by the Papuan Flowerpecker, at Mek the Black-breasted Boatbill is held responsible.

2.18. Robins

2.18.1. Boomam was unambiguously identified as Torrent Flycatcher (*Monarchella muelleriana*). It is exclusively met near creeks and rivers. Nokopo informants report the nest being built of soil and under small waterfalls. The term boomam is used for other phenomena showing large white patches (fur colours of domestic pigs, male nut pandans).

For Yopno people of the lower section of the valley the Torrent Flycatcher is a symbol for their unity, which is established and reinforced by the puak-dance cycle. In the songs performed at these dances, the Torrent Flycatcher takes a prominent position (cf. chapter 6).

2.18.2. The term lekdadat means "flashing wings" and is applied to Garnet Robins (*Eugerygone rubra*). The habit of nervously jerking around and flashing wings is characteristic for this bird (Beehler et al. 1986:177). They are met in LMMF and rarely hunted.

2.18.3. Blue-grey Robins, (*Peneothello cyanus*), are called kindsilim and are common to Nokopo forested areas. They are taken using various devices.

2.18.4. Kobak refers to small, yellowish birds. Nokopo people identified kobak as a gerygone and also as the Canary Flycatcher (*Microeca papuana*). Probably also other small yellowish birds are subsumed under this heading, as Nokopo informants reported contradictory feeding habits.

2.18.5. The designation wusa menaam (bird of the dawn) or synonymously gwangget, was also used ambiguously. It was identified as Canary Flycatcher, White-faced Robin (*Tregellasia leucops*) and as Mountain Peltops (*Peltops montanus*). It proved impossible to sort out the actual range of the Nokopo term.

2.19. Whistlers and pitohuis

2.19.1. The term sengaam was referred to different whistlers: Common Golden Whistler (*P. pectoralis*), Sclater's Whistler (*P. soror*), Regent Whistler (*P. schlegelii*) and Mottled Whistler (*Rhagolagus leucostigma*). The diet reported for sengaam, fruit of wiwi (*Schefflera spp.*), yavam (*Cypholophus sp.*), gurung (*Homolanthus novoguineensis*), komin (*Pipturus argenteus*) and of sindaap (*Pittosporum sp.*), fits best the records about the diet of Mottled Whistlers. The other whistlers of the list are insectivores.

2.19.2. Dep gaman means red head and refers to the red nape of the Rufous-naped Whistler (*Pachycephala rufinucha*). Nokopo informants report the bird to feed on insects and the fallen fruit of the unidentified tree dsua dsua. The bird is taken in LMMF using various devices.

2.19.3. Muguguk was identified at Nokopo as the Variable or the Hooded Pitohui (*Pitohui kirhocephalus* or *P. dicrous*), and only occurs in the lower levels of Nokopo LMF. It is said to feed on the fruits of naap teven (*Sabia pauciflora*) and of the unidentified tree makare, which does not grow on Nokopo territory but only farther down the Yupna valley. The bird has a pungent smell and is therefore not hunted. It is said to cause nausea just when smelling it. The designation used in another Yopno village (Mek) refers to this characteristic: kok isip "irritant to the intestines". As only Variable Pitohuis show this characteristic, the Yopno reports most probably refer to the Variable Pitohui (personal communication F. Buonoccorsi).

2.20. Berrypeckers and flowerpeckers

2.20.1. Papuan Flowerpeckers (*Dicaeum pectorale*) are called dit. They are reported to feed on a range of mistletoes called dit kok, that is "faeces of the Papuan Flowerpecker. The birds also feed on the fruits of *Cordyline fruticosa* and of *Pittosporum ?ramiflorum*. Nokopo people tell stories about the association of Papuan flowerpeckers with mistletoes (cf. chapter 6). Flowerpeckers are trapped with birdlime and by traps built around their nests.

2.20.2. The term moyem was referred to several berrypeckers: Mid-mountain Berrypecker (*Melanocharis longicauda*), Fan-tailed Berrypecker (*M. versteri*), Streaked Berrypecker (*M. striativentris*) and male Spotted Berrypeckers (*Rhamphocharis crassirostris*). Nokopo people report a range of food plants for these birds: a *Cypholophus sp.*, *Pipturus argenteus*, *Piper wabagense*, *Homolanthus novoguineense*, *Commelina diffusa*, a *Freycnetia sp.*, *Sabia pauciflora*, a *Melatostoma sp.* and two unidentified trees, one perhaps in the Rutaceae. There is a range of devices and traps applied to take moyem-berrypeckers.

2.20.3. Female Spotted Berrypeckers (*Rhamphocharis crassirostris*) with their distinct speckled plumage are called kwanamoyem and considered to be closely related to the other berrypeckers. They are said to feed like moyem on the two species in the Urticaceae, komin (*Pipturus argenteus*) and yavam (*Cypholophus sp.*). However, the figs of *Ficus sterrocarpa*, a tree which is called kwanam, are considered their main food. Thus, the name for female Spotted Berrypeckers means "figpecker". They are not trapped but only shot from hides. Kwanamoyem plays an important role in the oral lore (cf. chapter 6).

2.21. White-eyes

White-eyes are called gurung menaam, literally "*Homolanthus novoguineense* - birds", as they are said to feed predominantly from this tree. They also feed on the fruits of, *Pipturus argenteus*, of a *Cypholophus sp.*, on fruits of two unidentified trees of LMF, and on insects. "*Zosterops novaeguineae* and *Z. atrifrons* coexist in forest and forest edge between altitudes of 900-1400 m in Morobe Province. The two species are nearly identical in all respects, behavioral and ecological..." (Beehler 1982:858).

2.2. Honeyeaters

Nokopo distinguish 12 honeyeaters, some are considered related, others are considered to be unrelated

2.22.1. Golda taakwan was unambiguously identified as Slaty-chinned Longbill (*Toxorhamphus poliopterus*). The bird is said to occur everywhere in Nokopo forested territory; however it is reported to feed on a range of foodplants which are restricted to LMF, mainly several gingers (*Alpinia spp.* and *Nicolaia elatior*). The name golda taakwan means "wild relative of the cultivated bananas" and is also used to refer to one of these gingers of LMF. Nokopo people use several devices to trap Slaty-chinned Longbills at their foodplants.

2.22.2. Kabekabet are said to be very rare and only one informant identified it as Dwarf Honeyeater (*Oedistoma iliolophus*). It feeds on insect and on the young regrowth of *Pipturus argenteus* and of an unidentified tree of LMF.

2.22.3. Myzomelas are called taowyeng, a designation which was applied to three species (*Myzomela cruentata*, *M. adolphinae* and *M. rosenbergii*). Several trapped individuals which were brought to my house were all *M. rosenbergii*. Male myzomelas, and of these in a restricted sense Red Myzomelas (*M. cruentata*), are called taowyeng gaman, "red myzomelas". Females were designated as taowyeng kabere, "dull" or "drab myzomela". Taowyeng are considered to feed on the same range of plants as sungu- and mitmit-lorikeets (cf. section 2.6.). A *Dendrobium sp.* with red, tubular flowers is called taowyeng dsaap ("food of the myzomelas"), thus indicating an additional food plant of these birds. Myzomelas, although rather small, are considered a good prey with fat and tender meat. They are taken using a variety of techniques.

2.22.4. Serang was identified by only two informants who consider it to be a *Meliphaga sp.* (probably *Meliphaga orientalis*). These birds are reported to feed on a range of flowers and fruit in Nokopo LMMF. It is hunted by various techniques.

2.22.5. Abangoi was identified as Black-throated Honeyeater, (*Lichenostomus subfrenatus*), and reported to feed on the same range of plants as sungu- and mitmit-lorikeets (cf. section 2.6). It is hunted using the same range of techniques as taowyeng (cf. 2.22.3.).

2.22.6. Tukngok was unambiguously identified as Helmeted Friarbird (*Philemon buceroides*). It occurs everywhere in Nokopo territory and is said to feed on insects.

2.22.7. Sirek sirek was known to only two informants, who identified it as Brass's Friarbird (*Philemon brassi*). A confusion here with other friarbirds is likely! (e.g. Meyer's Friarbird, *Ph. meyeri*). The bird is said to be common everywhere in Nokopo territory. The following four birds are considered to be related to each other based on the notion that they feed on the same range of plants.

2.22.8. The term buya was referred to several *Ptiloprora spp.* (*P. guisei*, *P. perstriata*, *P. plumbea* and *P. erythropleura*). According to habitat (Beehler et al. 1986: 205-06) and voice characteristics, most probably only one species, the Rufous-backed Honeyeater (*Ptiloprora guisei*) occurs in Nokopo MMF. Nokopo people take the plaintive calls of the bird as a symbol for mourning. They consider it to be a close but smaller relative of nyingkok and other *Melidectes spp.* (cf. 2.22.9-11). A *Cyrtandra sp.* called buyawanda, that is "food of the Rufous-backed Honeyeater", is considered to be this bird's most characteristic food. However, besides the buyawanda growing LMMF, Nokopo people also recognize a slightly different buyawanda-plant restricted to LMF. The LMF-plant is reported to be visited by Slaty-chinned

Longbills, and not by rufous-backed honeyeaters. A small *Bulbophyllum sp.* with tiny greyish flowers was in another context also called "food of the Rufous-backed Honeyeater": buya dsaap, but was not mentioned as a food plant while discussing the bird. Rufous-backed Honeyeaters are considered to be a quarry of inferior quality: the meat is said to be watery and the feathers are too drab to be used for ornaments.

2.22.9. Several pale-billed *Melidectes* with pale blue or greenish eye patches were designated as nyingkok: *Melidectes ochromelos*, *M. rufocrissalis* and the "hybrid" form of *M. belfordi*. Niyngkok and other *Melidectes spp.* are considered to be larger, close relatives of Rufous-backed Honeyeaters.

2.22.10. The designation, olong, most probably refers exclusively to the Huon Melidectes (*Melidectes foersteri*). It is restricted to Nokopo MMF.

2.22.11. Pisisot was unambiguously identified as Ornate Melidectes (*Melidectes torquatus*).

2.22.12. Spangled Honeyeaters (*Melipotes ater*) are called tabel gaman, "red eye", after their reddening eye-skin when flushed.

Table 2 Foodplants of Honeyeaters.

	3	5	8	9	10	11	1	4	12	2	7
mata *Pittosporum ramiflorum*	+	+	+	+	+	+	+	+	-	-	-
dsotal *Zingiberaceae*	+	+	+	+	+	+	+	+	-	-	-
tepma *Schefflera spp.*	+	+	+	+	+	+	-	+	+	-	-
dsamben *Rubiaceae*	+	+	+	+	-	+	-	+	-	-	-
eval *Elaeocarpus sp*	+	+	+	+	-	+	-	+	-	-	-
gasu *Syzygium sp*	+	+	+	+	-	+	-	+	-	-	-
brap *Acalypha sp.*	+	+	+	+	-	+	-	+	-	-	-
kwawa *Dimorphanthera sp.*	+	+	+	+	-	-	-	+	+	-	-
womad *Carpodetus sp.*	+	+	+	-	-	+	-	-	+	-	+
kel *Zanthoxylum conspersipunctatum*	+	+	-	+	-	-	-	-	-	-	-
gep *Ficus calopilina*	+	+	-	-	-	-	-	-	-	-	-
dsigek *Cerbera floribunda*	+	+	-	-	-	-	-	-	-	-	-
deeng *Dendrobium sp.* karang	+	-	+	-	-	-	-	-	-	-	-
yaok yaok *Helicia sp.*	+	-	+	-	-	-	-	-	-	-	-
pelit *Vaccinium sp.*	+	-	-	-	-	+	-	-	-	-	-
kabun *Timonius sp.*	+	-	-	-	-	-	-	-	-	-	-
yengyeng *Dendrobium* gaman *phlox*	+	-	-	-	-	-	-	-	-	-	-
kaldsat *Ericaceae*	-	+	-	-	-	-	-	-	-	-	-
kuya *Garcinia sp.*	-	+	-	+	-	-	-	-	-	-	-
buya-wanda *Cyrtandra sp.*	-	-	+	-	-	-	+	-	-	-	-
olpap *Geniostoma sp.*	-	-	+	-	-	-	-	-	-	-	-

kalek	-	-	-	-	+	-	-	-	-	-	-
gomban *Cordyline fruticosa*	-	-	-	-	-	+	+	-	-	-	-
kopi *Coffea ?arabica*	-	-	-	-	-	+	-	-	-	-	-
dsua *Erythrina variegata*	-	-	-	-	-	+	-	-	-	-	-
golda *Musa* x *paradisiaca*	-	-	-	-	-	+	-	-	-	-	-
dsamba *Saurauia tugul*	-	-	-	-	-	+	-	-	-	-	-
yomaka *Alpinia sp.*	-	-	-	-	-	-	+	-	-	-	-
mara-pinpin *Nicolaia elatior*	-	-	-	-	-	-	-	+	-	-	-
golda-taakwan *Zingiberaceae*	-	-	-	-	-	-	+	-	-	-	-
bilup *Graptophyllum pictum*	-	-	-	-	-	-	+	-	-	-	-
dsalup *Graptophyllum sp.*	-	-	-	-	-	-	+	-	-	-	-
kisekin *Rubiaceae*	-	-	-	-	-	-	-	-	+	-	-
koring *Alocasia macrorrhizus*	-	-	-	-	-	-	-	-	+	-	-
songit *Symplocos cochin-chinensis*	-	-	-	-	-	-	-	-	+	-	-
womerem isirisit *Ficus mollior*	-	-	-	-	-	-	-	-	+	-	-
Lythraceae	-	-	-	-	-	-	-	-	+	-	-
dsimbe *Rutaceae*	-	-	-	-	-	-	-	-	+	-	-
gen *Euodia crispula*	-	-	-	-	-	-	-	-	+	-	-
tumbung *Kibara papuana*	-	-	-	-	-	-	-	-	+	-	-
komin *Pipturus argenteus*	-	-	-	-	-	-	-	-	+	+	+
dapndat "	-	-	-	-	-	-	-	-	-	+	+
yavam *Cypholophus sp.*	-	-	-	-	-	-	-	-	+	-	+
mangpak *Ficus sterrocarpa*	-	-	-	-	-	-	-	-	+	-	+
kwamda "	-	-	-	-	-	-	-	-	-	-	+
kildsik *Ficus gul*	-	-	-	-	-	-	-	-	-	-	+
kotengat *Ficus wassa*	-	-	-	-	-	-	-	-	-	-	+
	3	5	8	9	10	11	1	4	12	2	7

3: taowyeng, *Myzomela spp.*
5: abangoi, *Lichenostomus subfrenatus*
8: buya, *Ptiloprora guisei*
9: nyingkok, *Melidectes spp.*

10: olong, *Melidectes foersteri*
11: pisiot, *Melidectes torquatus*
1: golda taakwan, *Toxorhamphus poliopterus*
4: serang, *Meliphaga ?orientalis*
12: tabel gaman, *Melipotes ater*
2: kabekabet, *Oedistoma iliolophus*
7: sirek sirek, *Philemon spp.*

2.23. Parrot-finches and mannikins

2.23.1 Piyam are Blue-faced Parrot-finches (*Erythrura trichroa*). The other possible parrot-finch species, *E. papuana*, is most probably not present according to reported feeding habits: the birds take seeds of *Commelina diffusa*, of a *Tagetes sp.*, and most frequently of *Polygonum nepalense*, a knotweed also called piyam by Nokopo people.

.2.23.2. The term butsip is used to refer to mannikins (*Lonchura spp.*). They are said to feed on the same range of seeds as piyam. These small birds are valued prey as it is possible to take them in large numbers by setting traps at their nests.

2.24. Wood-swallows

The term tangwaol was referred to Great Wood-swallows (*Artamus maximus*). However, several people seem to confuse it with the Torrent Flycatcher, which also shows a bold black and white plumage-pattern. The birds feed on insects and are difficult to kill as they are very good flyers and thus escape the arrows. The bird is alternatively called demembut and said to feed not only on insects but also on a range of forest trees.

2.25. Birds of paradise and bowerbirds.

Nokopo people distinguish three clusters of B.o.P. and bowerbirds:

2.25.1. The designations nyat nyat and dakwalova refer to three different birds. Nyat nyat refers to Superb B.o.P. (*Lophorina superba*) and to Wahnes' Parotias (*Parotia wahnesi*). The term dakwalova is used to designate Macgregor's Bowerbirds (*Amblyornis macgregoriae*) as well as Wahnes' Parotias.

Thus, Wahnes' Parotias are ambiguously designated: when stressing common habits, that is displaying on the ground at specially designed sites, a habit common to bowerbirds and parotias, they are called dakwalova. When stressing common appearance, that is black birds with bright metallic breast-shield, they are called nyat nyat.

Nokopo people sometimes seem to confuse these three birds with each other: when asked to draw a displaying bowerbird, one informant clearly depicted a parotia but with bright orange head wires, the same colour as the crest of the bowerbird. Wahnes' Parotias are also easily confused with Superb B.o.P. (Beehler Pratt and Zimmerman 1986:229). However, it seems that the two birds labelled nyat nyat, do not occupy the same habitat: Wahnes' Parotias are mainly found in LMF and Superb B.o.P. along the gullies in the grassland as well as in disturbed LMMF (cf. also Everett 1987:76-78). Therefore, the distinction of the two birds according to their appearance might be not important for Nokopo people.

A distinction is only necessary to make when considering their divergent habits (cf. chapter 3 on hunting techniques). Superb B.o.P. normally reside quite close to human settlements and activities, for instance males regularly display at the eucalypts planted next to the airstrip in the Daaldaal valley.

Bronze Ground-doves are called dakwat and thus linked by name to the before described cluster (cf. the section on doves and pigeons). Informants from other Yopno villages (Mek and Taeng) used the term dakwat or dakwal exclusively to designate bowerbirds. Macgregor's Bowerbird builds its bower along the crest of the forested ridge in Nokopo LMMF. It decorates the maypole-type bower with blue flowers of labiates, red, shed leaves of an *Elaeocarpus* species and of *Symplocos cochinchinensis* and red berries of gingers and of a *Geniostoma* species, and -at the higher altitudes of the Daaldaal valley- with the orange fruits of *Stephania ?montana.* Nokopo people consider the bower of Macgregor's Bowerbird to be an equivalent of their men's ceremonial houses. They interpret male display behavior at the bowers as initiation of young male bowerbirds by their fathers. Female bowerbirds attracted by displaying males are like immature male bowerbirds, drab coloured. Bowerbirds and their ceremonial houses in the forest, the bowers, play a major role in mythical lore (cf. chapter 6).

2.25.2. Samun and sunumaak are considered to be closely related to each other, to belong to the same family and are reported to feed on the same range of plants. Samun refers to male, sunumaak to female Huon Astrapias (*Astrapia rothschildi*). Sunumaak is synonymously called samun kwawat, kwawat means "widower" or "deprived": The feathers of samun are iridiscent, the plumage of sunumaak is dull and lacks the iridiscence. Both birds feed on plants of Nokopo LMMF: *Schefflera spp.*, *Alocasia macrorrhizos*, a very common *Freycinetia sp.* (kamam) and on *Ficus sterrocarpa* of LMF. People of another Yopno village (Mek) reported the same *Bulbophyllum* species which Nokopo people reported as a foodplant for the Rufous-backed Honeyeater (cf. section 2.22), as a food plant for samun and sunumaak. They further reported the orchid to be used by these birds for nesting material and accordingly call it samun yut, "house of the Huon Astrapias". The skin of samun is a highly cherished ornament and single tail feathers are mounted on dance hats.

The birds are trapped at ripe infructescenses of *Alocasia macrorrhizos* with devices called koring (A. macrorrhizos) paat (trap), or at small creeks with wome (water) paat (traps).

2.25.3. The designations kina and yagun are used to refer to male and female Emperor B.o.P. respectively (*Paradisaea guilielmi*). These birds do not occur on Nokopo territory but only farther down in the lower section of the Yupna valley below about 1400 m. Nokopo people import the skins of kina and use them as dance ornaments. They know in some detail the feeding habits of these birds and the hunting techniques applied.

2.25.4. Yagun kwadat were identified as scrub wrens (*Sericornis spp.*). However, reported feeding habits rather point to females of B.o.P. Yagun kwadat, like kina and yagun, only live at lower altitudes and do not occur on Nokopo territory.

Table 3. Foodplants of bowerbirds and B.o.P.

		1	2	3/4	5/6	7
kabetkabet	*Harpullia spp*	+	+	+	+	+
Elattostachys	*obliquinensis*					
bolak teven	*Arthrophyllum macrantrum*	+	+	-	-	-
	Polyscias belensis					
aval	*Elaeocarpus sp.*	+	-	-	-	-
laak kwak	*Nothocnide melastomatifolia*	+	-	-	-	-
bagabaga	*Smilax ovato-lanceolata*	-	+	-	-	-
naap teven	*Sabia pauciflora*	-	+	-	-	-
dubit	*Freycinetia sp.*	-	+	-	-	-
mata	*Pittosporum ?ramiflorum*	-	+	-	-	-
yaring	*Podocarpus neriifolium*	-	+	-	-	-
womad	*Carpodetus sp.*	-	+	+	-	-
mangpak	*Ficus sterrocarpa*	+	-	+	-	-
koring	*Alocasia macrorrhizos*	-	-	+	-	-
tepma	*Schefflera sp.*	-	-	+	-	-
kamam	*Freycinetia sp.*	-	-	+	-	-
songit	*Symplocus cochinchinensis*	-	-	+	-	-
kamep	*Pandanus conoideus*	-	-	-	+	-
komin	*Pipturus argenteus*	-	-	-	+	+
yavam	*Cypholophus sp.*	-	-	-	-	+
gurung	*Homalanthus novoguineensis*	-	-	-	-	+

1: dakwalova, *Amblyornis macgregoriae* and *Parotia wahnesi*
2: nyat nyat, *Parotia wahnesi* and *Lophorina superba*
3/4: samun and sunumaak, *Astrapia rothschildi*
5/6: kina and yagun, *Paradisaea guilielmi*
7: yagun kwadat, *?Sericornis spp.*

Nokopo bird taxonomy differs from the system used in this chapter. However, the Nokopo way to look at birds is not so different from western bird classification than is often claimed as a sort of general rule by researchers into non-western taxonomies. There are conspicuous differences between western classification and Nokopo classification of birds, for instance the peculiar status of cassowaries (cf. chapter 5), the preference of habits or habitat as discriminating factor over appearance, and other "exotic" features. However, in most cases Nokopo taxonomists and western taxonomists agree upon bird classification. The few spectacular cases tend to veil this fact.

There are various dimensions which serve Nokopo people to distinguish birds from each other, to divide them up into clusters. These dimensions are similar to those mentioned by Bulmer in his article about Kalam classification of birds (1979):

1. Diurnal and nocturnal birds.
2. Forest and grassland birds.
3. Higher altitude and lower altitude birds.
4. Terrestrial and arboreal birds.

5. Clusters of birds with the same or similar feeding habits.

1. The distinction of the few nocturnal birds from the many diurnal birds is important and made by all people at Nokopo. They have a term to refer to nocturnal birds: pelin kaa menaam ("darkness grove birds"), whereas diurnal birds are just menaam ("birds"). The nocturnal raptors are spoken of with awe and respect, this especially concerns the Sooty Owl balum, which hunts marsupials at night like human hunters do.

2. As for Kalam people the forest-cultivation dichotomy (that is the difference between natural forest and anthropogenic grassland) and thus the nature-culture dichotomy is very important and is a crucial cultural concept (cf. Kocher Schmid 1991:45-7). Most birds are koron menaam ("forest birds"), a few are onan menaam ("grassland birds"), see the list in appendix 8.4, section 10.

3. The term koron is polysemously used, it also refers, when used in contrast to tale ("warm lowlands"), to the cold highlands. Thus, the designatiion koron menaam is also used to distinguish birds indigenous to Nokopo territory from birds of the lower altitudes, tale menaam (listed in appendix 8.4, section 10).

4. The terrestrial-arboreal distinction is not very marked but several birds are subsumed in the category maktem menaam ("ground" or "floor birds"), for instance the quails pulu, the megapodes toa and the ground-doves dakwat.

5. According to their similar feeding habits, groups of birds are placed in clusters. These clusters are either unnamed or labelled with the term for the most prominent or salient member of the cluster in combination with the term silep ("family, household"):

-Several doves and pigeons (yoyo, kanaarem and gemat) are subsumed under the term kanaarem silep. Kanaarem Rufescent Imperial Pigeons are the largest species in this set and a highly cherished quarry to Nokopo hunters.

-The lorikeets sungu, the myzomelas taowyeng and Black-throated Honeyeaters abangoi are subsumed under the term sungu silep. Sungu, Papuan Lorikeets, the largest birds of this group, are valued for their colourful skins and are also important in the mythical lore (cf. chapter 6). Sungu, taowyeng and abangoi share five foodplants, four of these are also visited by the birds of the buya silep (cf. later), the fifth, a fig tree, seems to be the characteristic foodplant of the sungu silep (cf. tables 1 and 2).

-The buya silep includes Rufous-backed Honeyeaters buya, several pale-billed melidectes nyingkok, and Ornate Melidectes pisisot. Buya, Rufous-backed Honeyeaters are considered awe-inspiring birds, not only are their calls a symbol for mourning and death but their meat is not consumed by Nokopo people. Huon Melidectes, olong are sometimes loosely affiliated to the buya silep. This clearly shows in table 2, where buya, nyingkok and pisisot share seven foodplants. Buya and nyingkok, which are considered to form a closely related pair within the buya silep, additionally share a *Dimorphantera* climber. On the other hand, olong only has three foodplants in common with buya, nyingkok and pisisot. However, *Meliphagas* serang, which according to table 2 share the eight foodplants common to buya and nyingkok, are not considered to belong to the same cluster.

These discussed dimensions are used without taxonomic rigidity, they may intersect each other, for instance nightjars balum balum are pelin kaa menaam ("darkness grove birds"), but they are also onan menaam ("grassland birds"), and tengaak Eclectus Parrot are tale menaam ("lowland birds") as well as koron menaam ("forest birds").

There are additional clusters of closely related birds recognized by Nokopo people. These clusters are more or less in accordance with western classification, examples are the diurnal raptors described in section 2.3, the parrots of section 2.6.1, the lorikeets of section 2.6.2, the cuckoos and koels of section 2.8.5, swifts, swiftlets and swallows of section 2.9, and small insectivorous birds roughly in accordance with section 2.16.

Nokopo people distinguish a total of 106 bird taxa from each other. Of these, 77 are primary taxa (40 of these are terminal), 25 are secondary taxa (with 23 terminal ones), and four are tertiary, terminal taxa. Of the 77 primary taxa, 24 belong to eight diffferent unnamed superordinate categories (cf. before, dimension 5). Another five primary taxa are subsumed under the labelled superordinate category pelin kaam menaam ("darkness grove birds"), see before, dimension 4.

1. Hunting Techniques

Nokopo men dispose of a range of techniques to hunt birds. They apply them according to the habits and the desirability of the prey.

Hunting Techniques		**No. of Taxa hunted with technique**
1.	**Shooting with bow and arrow**	
1.1.	without further preparations	64
1.2.	constructed hiding-place	
1.2.1.	wome yut "water house"	10
1.2.2.	kamep yut "oil pandan house"	2
2.	**"Clubbing" with branches**	**1**
3.	**Traps**	
3.1.	built around nest, fledglings as decoy or combined with luring	30
3.2.	built around bower	1
3.3.	built around drinking sites	15
3.4.	built around licking sites	1
3.5.	built around food plants:	
3.5.1.	gingers, *Alpinia spp. Nicolaia sp.*	10
3.5.2.	umbrella trees *Schefflera spp.*	8
3.5.3.	wild taro, *Alocasia macrorrhizos*	3
3.5.4.	kamam vine, *Freycinetia sp.*	2
3.5.5.	dubit vine, *Freycinetia sp.*	1
3.5.6.	palmlilies, *Cordyline fruticosa*	1
3.5.7.	kwamda (unident.)	1
3.6.	built around fallen fruit on forest floor	2
3.7.	built on the way of the prey (like traps for terrestrial mammals)	74.
4.	Trapping with bird lime	8

3.1.1. Shooting with bow and arrows without further preparation. The greatest proportion, 64 of 94 different listed taxa, are hunted with bow and arrow without any special preparation. That is, whenever observing these birds in suitable distance and position, an attempt to shoot them is made. In the strict sense of the word, this is not hunting but predation (Ingold 1986:87pp): bow and arrows are part of the male costume and always carried also when there is no intention to procure game. However, sometimes men and boys, when entering the forest, furnish some of their arrow shafts with blunt clay tips. Such an arrow is best suited for birds as the blunt tip only stupefies the animal and does not damage its feathers.

Of the 64 bird taxa which can be hunted with bow and arrow only 24 are exclusively taken by this method:

Large diurnal and nocturnal raptors:
- balum (*Tyto tenebricosa*, Sooty Owl)
- balum balum (*Caprimulgus macrurus* and *Eurostopodus archboldi*, nightjars)
- gwaok (*Podargus spp.*, frogmouths and *Aegotheles spp.*, owlet-nightjars)
- gengaarat (*Ninox rufa*, Rufous Owl)
- karanoknok (a small eagle or a large goshawk)
- ko (*Accipiter sp.*, goshawk
- num num (*Scolopax saturata*, Rufous Woodcock)
- tovat (a rare large eagle or buzzard).

Large birds with desirable feathers and/or substantial meat:
- gokek (*Cacatua galerita*, Sulphur-crested Cockatoo)
- kangare putok (*Rhyticeros plicata*, hornbill)
- kungaak (*Rallina forbesi*, Forbes Forest -rail)
- nyat nyat (*Lophorina superba*, Superb B.o.P. and *Parotia wahnesi*, Wahnes' Parotia
- pulu (*Coturnix australis* and *C. chinensis*, Brown and King Quail)
- saoreng (*Probosciger aterrimus*, Palm Cockatoo)
- susum (*Alisterus chloropterus*, Papuan King-parrot
- tomo long (*Halycon spp.*, kingfishers)
- yarurum (*Cacomantis spp.*, cuckoos).

Culturally unimportant insectivores which are rarely hunted but rather subject to predation:
- dsirik pelit (*Anthus novaeseelandiae*, Richard's Pipit)
- bindsindsim (*Motacilla cinerea*, Grey Wagtail)
- pisisirip (*Grallina brujini*, Torrent lark and/or *Malurus alboscapulatus*, White-shouldered Fairy-wren)
- sengaam (*Pachycare sp.*, whistlers and *Rhagologus leucostigma*, Mottled Whistler).
- singkwak (*Tyto capensis*, Grass Owl)
- singtul (*Rhipidura albolimbata*, Friendly Fantail)
- yagum kwadat (?*Sericornis spp.*, ?scrub wrens)

3.1.2.Constructed hiding-places

3.2.1.1. Wome yut, "water house". In the dry season Nokopo men build cone-shaped huts near creeks in the forest to lure for drinking birds. They cover the water with leaves and other material,

leaving open only a small space next to the hut. Preferably in addition a small dam is constructed, to create a small waterfall (called soeng in contrast to natural waterfalls wometer). The hut is built from branches combined with palm- and fern fronds. A thin bamboo tube or a straight stick is placed across the water for the bird to perch and drink. A larger bamboo tube is inserted into the wall of the hut in such a way that it points directly to the perch. The hunter crouches hidden in the hut and shoots the perching birds through this tube. To the other end of the stick put across the water, a small bale of moss is fixed to smoothen the rebound of the shot bird. Of the ten taxa taken by this method, only kwanamoyem (female *Rhamphocharis crassirostris*, Spotted Berrypecker) is not subject to any other hunting strategy. The others can also be taken using other hunting techniques:

darek (*Sericornis spp.*, scrub wrens and *Crateroscelis spp.*, mouse- warblers)
dep gaman (*Pachycephala rufinucha*, Rufous-naped Whistler)
dsingdet (*Malurus spp.*, fairy-wrens and/or *Monarcha axillaris*, Black Monarch)
kindsilim (*Peneothello cyanus*, Blue grey Robin)
olong (*Melidectes foersteri*, Huon Melidectes)
samun and sunumaak (*Astrapia rothschildi*, Huon Astrapia, male and female)
silek (*Rhipidura spp.*, fantails)
wikat (*Melampitta lugubris*, Lesser Melampitta)
yaalsapsap (*Ptilorrhoa leucostica*, Spotted Jewel-babbler)
yoyo (*Ptilinopus spp.* and *Ducula spp.*, nomadic fruit-doves and pigeons).

3.2.2. Kamep yut, "oil pandan house", is similar to the "water house" . It is built in the lower section of the Yupna valley near oil pandans (*Pandanus conoideus*) with ripe fruit. There the hunter lure for male (kina) and female (yagun) Emperor Birds of paradise (*Paradisaea guilielmi*). Nokopo people know the practice but on their territory those birds are not found.

3.2. Clubbing with branches is an unusual method was reported to be used to kill Glossy Swiftlets, kalasip (*Collocalia esculenta*). With this method the hunter takes a faggot (karang karang) in each hand and tries to club the flying swiftlet as soon as it is in reach. It is considered impossible to shoot these birds with bow and arrow, because they are said to move too fast. However, I never observed the practice and during my main observation period of 11 months, no Glossy Swiftlets were taken.

3.3. Traps are by far the most frequently practiced method to hunt birds. All traps consist of a frame (kadaat) or a husk (yut) with a snare (mandset mandset) hanging from it and a triggering mechanism (bin).

3.3.1. Traps built around the nest are called putuknyi (fledgling) paat (trap). These methods of building the trap around the nest and using the fledglings as "baits" for the adults, aremainly applied when hunting insectivores which cannot be trapped at food plants. Similarly the fledglings are used as decoys and the adult birds shot with bow and arrows by the luring hunter. 30 taxa are hunted using both or one of these methods. However, only boomam (*Monachella muelleriana*, Torrent Flycatcher) was reported to be taken exclusively by these methods.

Fourteen taxa are also hunted with bow and arrow without further preparations:

baina (small goshawk)
butsip (*Lonchura spp.*, mannikins)

gworek (small grassland birds)
gurung menaam (*Zosterops spp.*, white-eyes)
kabekabet (*Oedistoma iliolophus*, Dwarf Honeyeater)
kobak (small, yellowish, insectivorous birds)
kwidnaak (*Lanius schach*, Long-tailed Shrike)
leb leb (*Coracina spp.*, cuckoo-shrikes)
nyingwaol (*Saxicola caprata* Pied Chat)
piyam (*Erythrura trichroa*, Blue-faced Parrot-finch)
talabusit (*Machaerirhynchus nigripectus*, Black-breasted Boatbill)
tukngok (*Philemon buceroides*, Helmeted Friarbird)
wusa menaam (?*Tregellasia leucops*, White-faced Robin).

Another bird, dep gaman (*Pachycephala rufinucha*, Rufous-naped Whistler), is also trapped at drinking sites (cf. later) and a further six taxa are additionally taken with bow and arrow as well as trapped at drinking sites:

darek (*Sericornis spp.* and *Crateroscelis spp.*, scrub-wrens and mouse-warblers)
dsingdet (*Monarcha axillaris*, Black Monarch)
kindsilim (*Peneothello cyanus*, Blue-grey Robin)
silek (*Rhipidura spp.*, fantails)
wikat (*Melampitta lugubris*, Lesser Melampitta)
yaalsapsap (*Ptilorrhoa spp.*, jewel-babblers)

One bird, sirek sirek (*Philemon spp.*, friarbirds), was said to be also trapped at its favourite food plant.

3.3.2. Male Macgregor's Bowerbirds (*Amblyornis macgregoriae*), called dakwalova, are trapped at their bowers using buyang (bower) paat (trap). This bird's bright orange crest is cherished as an ornament. There is no evidence that parotias, which are sometimes given the same designation as bowerbirds, are trapped in the same way.

3.3.3. Traps known as wome (water) paat (trap) are built around drinking sites. Small creeks in the forest are in the dry season covered with leaves, bark and other debris, leaving only a small site open for the birds to drink water. Around this ite a special trap, called wome (water) paat (trap, frame) is built. Fifteen different taxa are taken with this method. Seven of these taxa have already been mentioned with the putuknyi paat (cf. before), another four taxa -fruit-doves, cuckoo-doves and pigeons- are also hunted with bow and arrow:

baol (*Macropygia nigrirostris*, Black-billed Cuckoo-dove)
gemat (*Ptilinopus rivoli*, White-breasted Fruit-dove)
kanaarem (*Ducula chalconota*, Rufescent Imperial Pigeon)
yoyo (migrating fruit-doves)
yoyo are also frequently taken from the hunting shelter wome yut (cf. before).

Moyem (*Melanocharis spp.*, berrypeckers) and tabel gaman (*Melipotes ater*, Spangled Honeyeater) are not only additionally hunted with bow and arrow but also trapped at their foodplants.

Olong (*Melidectes foersteri*, Huon Melidectes),samun and sunumaak (both referring to the Huon Astrapia) are subject to all these methods plus the shooting from a hunting shelter.

3.3.4. Asep asep (to lick) paat (trap) are traps built around licking sites. Sugar glider remove the bark from the trees womad (*Carpodetus sp.*), and songit (*Symplocus cochinchinensis*) to lick those trees sap. The Vulturine Parrot (*Psittrichas fulgidus*), dsakwo, also visits these sites. A special trap, called asep asep paat (asep: to lick) is built on a small stick inserted into the tree trunk at the licking site. (The Vulturine Parrot also visits sites with removed bark at mata-trees (*Pittosporum ?ramiflorum*), cf. 3.4.)

3.3.5 The majority of traps are built around prominent food plants of desired birds. The designation for the respective traps varies with the plant concerned.

3.3.5.1. Dsotal paat: "ginger trap". Two flowering gingers growing in the appropriate distance from each other are selected. The hunter bends down one stalk from each ginger clump and fixes them on the ground, so that there is only a small space left between the two terminal inflorescences. Into this space he builds the trap. A bird feeding on one inflorescence will see the other nearby, and, choosing he shortest way to get there, is trapped by the neck in the snare. Ten taxa are taken by this method:

abangoi (*Lichenostomus subfrenatus*, Black-throated Honeyeater)
buya (*Ptiloprora guisei*, Rufous-backed Honeyeater)
golda taakwan (*Toxorhamphus poliopterus*, Slaty-chinned Longbill)
mit mit (*Neopsittacus musschenbroekii*, Yellow-billed Lorikeet)
nyingkok (*Melidectes spp.*)
olong (*Melidectes foersteri*, Huon Melidectes)
pisisot (*Meliphaga orientalis*, Mountain Meliphaga)
sungu (*Charmosyna papou*, Papuan Lorikeet)
taowyeng (*Myzomela spp.*)

3.3.5.2. Tepma paat: "umbrella plant trap". Nokopo people report 17 different birds attracted by flowering and/or fruiting umbrella plants (*Schefflera spp.*). However, they report only six taxa to be regularly trapped at those food plants:

abangoi (Black, throated Honeyeater)
mit mit (Yellow-billed Lorikeet)
olong (Huon Melidectes)
serang (Mountain Meliphaga)
sungu (Papuan Lorikeet)
taowyeng (*Myzomela spp.*)

To trap sungu (Papuan Lorikeets) which take a pivotal position in Nokopo lore (cf. chapter 6) special precautions have to be taken to ensure success: a small piece of bark from the umbrella plant on which the trap was built, is wrapped into a leaf of the ginger-cultivar sungu paldsik ("tail of the Papuan Lorikeet)"). This small parcel is then attached to the pendulous tip of a kwawa-climber (*Dimorphanthera sp.*) growing at the same tree as the tepma-epiphyte.

3.3.5.3. Koring paat: "wild taro trap". Four taxa are frequently trapped at the infructescences of wild taro (*Alocasia macrorrhizos)*. These birds cannot be trapped at other food plants but can also be taken at water sites.

moyem (berrypeckers, *Melanocharis spp*).
samun and sunumaak (male and female Huon Astrapias)
tabel gaman (Spangled Honeyeater).

3.3.5.4. Dubit paat: "scrambling pandan (of LMF) trap". Only the highly cherished Vulturine Parrot is trapped at inflorescences of a *Freycinetia sp.*, which is called dubit by Nokopo people and said to be this parrot's favourite food. Apart from the bright orange, fleshy bracts of this scrambling pandan, Vulturine Parrots are also reported to feed from fruits of *Ficus sterrocarpa.* For the dubit - *Freycinetia* Nokopo people reported only one other visiting bird, the Superb Bird of Paradise (*Lophorina superba*). A dubit paat has to be especially prepared, otherwise Vulturine Parrots cannot be trapped : the components of the trap have, before they are assembled, to be rubbed with a paste composed of the shoots of the dubit-*Freycinetia*, several other red-flowering plants and red earth pigments mangut. The remainder of this paste is wrapped into a leaf of the ginger-cultivar dsakwo (named like the bird) and the parcel then attached to a young dubit-*Freycinetia* where starting to grow up a tree. The parcel is thus carried upwards by the growing plants and its contents will later become part of the inflorescences which will be consumed by other vulturine parrots, thus ensuring that future birds will be trapped. Another method makes use of the same plant paste, to which the scraps of the newly built trap are added. The parcel is then attached to the stem of the dubit-*Freycinetia* on which the trap was built. This action is said to attract Vulturine Parrots to the trap. When a bird is caught, the parcel has to be removed from the stem of the vine and carried up to the trap by the hunter. Before taking the Vulturine Parrot from the trap the parcel has to be stroked over its plumage. Afterwards the parcel is deposited at the roots of the plant.

3.3.5.5. Gomban paat: "palm-lily trap". Slaty-chinned Longbills , golda taakwan, are trapped at flowering palm-lilies. This bird is also frequently trapped at flowering gingers (cf. 3.5.1). Nokopo people also report Papuan Flowerpeckers, dit, to feed on palm-lily berries.

3.3.5.6. Kaman paat: "scrambling pandan (of LMMF) trap". Seven different birds are said to feed on kaman -*Freycinetia.* Only two of them are regularly trapped: moyem (*Melanocharis spp.*, berrypeckers) and pikwi (Great Cuckoo-dove).

3.3.5.7. Kwamda paat: "kwamda trap". The bird sirek sirek (*Philemon spp.*, friarbirds) is reported to be the only visitor of the unidentified plant kwanda and to be trapped there. However, the plant was not found for identification.

3.3.6. Kisiwelong paat are traps built around or amidst fallen fruit on the forest floor to catch ground-dwelling birds. Dakwat, ground-doves (*Gallicolumba beccarii* and *G . jobiensis*) are a highly valued prey with much tender meat. They are reported to feed from fallen fruit of *Homalanthus novoguineensis* and the unidentified tree dsua dsua.. The Mountain Peltops (*Peltops montanus*) is also said to feed from fallen fruit and to be trapped in a similar way.

3.3.7. Traps built on the way of the prey, are known as kosit paat, "road trap". Four ground-dwelling birds are caught by traps set up on their path. This method is the same as that applied to

terrestrial mammals.

dsikwamen (King Quail)
toa (*Talegalla jobiensis*, Brown-collared Brush-turkey)
pamteng (*Aepypodius arfakianus*, Wattled Brush-turkey)
wung kungaak (? *Tringa hypoleucus*, Common Sandpiper)

3.4. Trapping by bird lime. Eight different honeyeaters and lorikeets are reported to be trapped at flowering mata - trees (*Pittosporum ?ramiflorum*):

abangoi (Black-throated Honeyeater)
dap dap (Pigmy Lorikeet, Goldie's Lorikeet, Plum-faced Lorikeet)
dit (*Dicaeum pectorale*, Papuan Flowerpecker)
golda taakwan (Slaty-chinned Longbill)
mit mit (Yellow-billed Lorikeet)
serang (Mountain Meliphaga)
sungu (Papuan Lorikeet)
taowyeng (*Myzomela spp.*).

A young Nokopo man reported the method: "Whenever I am walking in the forest and happen to see that the mata-trees flower, I will collect the latex of the tree dsigek (*Cerbera floribunda*). When I have found such a tree I climb it, cut some branches with leaves and new shoots attached to it and let them drop to the ground. Then I will climb down and collect the cut branches. I break the shoots off and the latex will flow abundantly. I have to wait for a few minutes until there is enough latex, then I collect it. Afterwards I take this latex to the flowering mata-tree. There I construct a scaffold to climb the tree and then I apply the latex to the flowering twigs. When I have finished, I get down again and hide myself. All those birds which like to feed on the flowers of the mata-tree are then caught by the sticky latex. After a while I climb the mata-tree again to collect the birds into my stringbag. I can repeat this procedure until dusk when the latex gets solid. Birds can be easily caught during the day. However, in the evening and during the wet season it will not work as the latex turns solid. That is it, the account of applying latex to the mata-tree."

The same sugar glider (*Petaurus breviceps*) which removes the bark of the trees womad and songit, also removes the bark from mata - trees. These sites are also treated with latex, especially sungu and mit mit are trapped there.

Mata-trees are not the only flowering trees visited by "a large, unorganized multi-species aggregation of foraging birds (Beehler 1982:859). Others include eval (*Elaeocarpus sp.*), brap gaman (*Acalypha sp.*), dsamben (*Rubiaceae*), and gasu (*Syzygium sp.*).

Eval and brap gaman are cultivated near the main settlement especially for the purpose of trapping birds. All other such trees are indigenous to several Nokopo forest types (but probably not to lowland hill forest). These aggregations of birds are said to include, besides the already mentioned taxa, also buya (Rufous-backed Honeyeater), nyingkok (*Melidectes spp.*) and pisisot (Ornate Melidectes).

4. Use

4.1. Food
Nearly all types of bird are eaten by Nokopo people, even tiny ones. Only the Hooded Pitohui mugukuk is considered inedible, because of its pungent smell. One other bird is considered edible but of inferior quality: buya, the Rufous-backed Honeyeater which is said to have watery meat. Other birds are highly cherished quarry.

Most doves and pigeons, that is, dakwat (Bronze Ground-doves), baol (cuckoo-doves), kanaaram (imperial pigeons), gemat (White-breasted Fruit-dove, -and to a lesser degree also yoyo (nomadic fruit-doves and Papuan Mountain Pigeon) - as well as the Long-tailed Shrike kwidnaak, are highly valued for having much meat and "no bones", that is the proportion of meat versus bones is considered to be better than with other birds.

The tiny myzomelas taowyeng are also cherished, they are said to have much body fat, moreover they can be trapped in large numbers at flowering trees. This also applies to butsip, mannikins, of which the single birds do not yield much meat, but they can usually be taken in large numbers.

There are several cooking methods applied to birds: roasting on embers, boiling in a pot or steaming in a bamboo tube. For boiling and steaming, the birds are first plucked and the intestines removed (colon and stomach with liver and gall), feet and head remain with the body. Then they are either boiled in water together with tubers and vegetables, preferably cabbage, or filled in a green, fresh bamboo tube together with the same additions and put onto embers until the bamboo tube is black and blistery.

For roasting the birds are put unprepared onto embers and the feathers are singed, then the intestines are removed and the bird roasted again.

Larger birds (doves and pigeons) are often boiled or steamed, smaller birds are rather roasted on embers. However, when many small birds are available, they are steamed in a bamboo tube like single, larger birds. The bones of small birds are eaten, whereas the larger birds' bones are removed.

Eggs of brush-turkeys (toa) are highly valued for food. They are collected in Nokopo LMF at the height of the dry season (June/July) when the brush-turkeys have built their large breeding mounds (toa melak, melak designates any artificial mound created by people or by animals). Older informants recalled that brush-turkeys used to be more abundant in former times. Nowadays people have reduced their population size considerably by overcollecting eggs and destroying breeding mounds. Moreover, in most forest areas the brush-turkeys are constantly disturbed by roaming pigs. Breeding mounds are nowadays only found farther than one hour walking distance from the main settlement, in those areas of warm LMF which are steeper and more rugged than usual. Brush-turkeys' eggs are carefully blown and the removed contents steamed in fresh green bamboo tubes. The remaining shell is used for items.

4.2. Items
Although the bones of doves and pigeons are not eaten, Nokopo people do not report them being used for items. Only cassowary's leg-bones were traditionally used to manufacture lime spatulas and bone-knives. Lime spatulas, called samak, were made from the humerus and knives, called

perek, from the femur of these birds. The femur-knives were exclusively used to break up oil-pandan drupes (*Pandanus conoideus*) and for no other purposes. These instruments are still considered the only proper instrument to break up oil-pandan drupes. However, only a few households still own one, the others use substitutes made from palmwood , bamboo or a commercial steel knife.

Brush-turkeys' eggs are not only consumed for food but the shells are also used. Broken shells are calcinated together with sea shells in split bamboo-tubes for lime to accompany *Areca*-seeds. A general account by a young man of how to prepare lime follows. "There are two methods for obtaining lime, one applied to limestone and the other to shells. In our language we call the lime produced from limestone abe (lime) si (real) and the one made from shells tap (sea) kadaat (bone, frame). The methods applied are quite similar with only small differences.

If you want to collect limestone you have to take a dry bamboo tube or an old stringbag or something similar, to put the raw limestone in it at the mining site. You take your full container back to the village and put it in the sun to dry. Then you take it to the garden area and you should not forget to take some water with you, too. You go to a bamboo grove and start to cut the dry culms, you have to cut them quite short, only the length of an internode. Then you cut them lengthwise, thus you obtain two halves to fill with the lime. When you have prepared enough bamboo-halves, you put the lime into a wooden bowl and add some water, you have to stir well to mix it thoroughly. Then you empty the mixture into the bamboo-halves. However, take care not to fill them up completely, only when you fill each container with a small quantity of the mixture will the lime turn out well. You put the filled bamboo-halves now close and neatly together and light a fire on top of them. The fire will burn down and then you have to wait for an hour. Then the lime is ready to remove, but you should not shovel it with your hands into some leftover bamboo tube lying around. You should cut a fresh green bamboo tube and carefully spoon the lime into it. Then you light another fire and place the green bamboo filled with lime onto it. You roast it until the skin of the bamboo is black and blistered. Now your lime is ready to consume, you only have to fill it into a fresh container.

The method for processing shells is similar. When you visit the seashore, you see a lot of small shells lying on the beach. Some of these are good to eat and others are inedible. You collect the empty shells and take them back to the village. Now you have to proceed as with stone-lime: you dry the shells well in the sun on top of a sheet of metal or on some planks while stirring them frequently. Now you collect some brush-turkeys'- or chicken's egg-shells and take them together with the sea-shells to the garden area. You prepare the bamboo-halves as before and fill the sea-shells into them. You add an egg-shell to each container. Then you proceed as with stone-lime: light the fire on top of them, then put the mixture into a fresh green bamboo tube and roast it again. Then the lime is ready to consume."

Nokopo people use white substances in divination practices to trace soul particles. Accordingly, amongst other white substances, lime processed from limestone and from shell as well as faeces of Torrent Flycatchers boomam are used for this purpose. The bird plays a more important role in the culture and concepts of the people from the lower sections of the Yupna valley (cf. chapter 6).

Intact blown egg-shells are kept carefully stored in bamboo tubes hung from the house rafters. Traditionally four such egg-shells were used to decorate the kong bayem, a structure made from plant materials at harvest ceremonies to visualize the presence of the ancestor spirits in the settlement.

The shells were painted with black and red motifs taken from an established set of designs and then attached to the structure. Nowadays egg-shells are occasionally painted but not used in the traditional way.

The most prominent use made of birds for items are feather-ornaments, the following birds are considered to have suitable skins or feathers:

Table 4. Feathers and skins used for ornaments

Designation	Identification	Habit	1	2	3	4
balum	*Tyto tenebricosa*	UMMF		+	+	
balum balum	*Caprimulgus spp.*	U(rare)	+	+		
fbindsindsim	*Motacilla cinerea*	U			+	
dakwalova	*Amblyornis macgregoriae*, m .	MMF	+	+		+
dsakwo	*Psittrichas fulgidus*	LHF/LMF	+	+	+	+
gogek	*Cacatua galerita*	LHF/LMF	+	+	+	+
kangare putok	*Rhyticeros plicatus*	LHF	+	+		
kina	*Paradisaea guilielmi*, m.	LHF	+	+		+
mit mit	*Neopsittacus musschenbroekii*	MMF	+	+		+
nyat nyat	*Parotia wahnesi, Lophorina superba*	MF/U			+	
samun	*Astrapia rothschildii*, m.	LMMF	+	+	+	
saoreng	*Probosciger aterrimus*	LHF		+	+	
singkwak	*Tyto capensis*	U(rare)			+	
sungu	*Charmosyna papou*	MMF	+	+	+	
sunumaak	*Astrapia rothschildii*, f.	LMMF		+		
susum	*Alisterus chloropterus*	MF	+		+	
tabel gaman	*Melipotes ater*	MMF		+		
tengaak	*Eclectus roratus*	LHF	+		+	
walap	*Casuarius bennetti*	MMF +	+	+	+	
yagun	*Paradisaea guilielmi*, f.	LHF +				
yagun kwadat	scrub wrens or female B.o.P.	LHF			+	

1: reported for head ornaments buyang at babek kaap-functions
2: reported for dance hats buyang at kaap-functions
3: reported to be used for feather-wheels or feather-poles at kong kaap-functions
4: reported for unspecified ornaments: kaap delim

Babek kaap is a traditional singing and dancing function which is nowadays only rarely performed. Nokopo men prefer the kaap which is influenced by coastal dancing costumes introduced by local mission assistants. Lyrics and rhythms of both functions are the same, they only differ with dance costumes. kong kaap functions are rarer events and only performed to celebrate major stages in the life-cycle. They involve considerable expenses of time and money. Rhythms and lyrics are different from those of kaap and babek kaap.

At babek kaap the men wore a special head-ornament called buyang (bower) consisting of a bamboo-comb wrapped in banana leaf-sheaths with inserted birds' feathers and skins. Stuffed skins of kina (male Emperior B.o.P.), sungu (Papuan Lorikeet), samun (male Huon Astrapia) and yagun (female Emperor B.o.P.) were combined with single feathers and feather-sticks. Most important was the rhythmic swaying of these elements.

The kaap is performed by men wearing triangle-shaped dance-hats with mounted feathers called buyang (or buyang menaam: bower/bird) like the comb for babek kaap. Those dance-hats are characteristic for the area of the Vitiaz Strait (Dark 1979: 154 and figs. 6-9 and 6-19.). The feathers, mainly large white and black wing- and tail-feathers, are alternatingly lined to form a crest with a showy element, for instance a B.o.P. -tail, in the middle. The iridescent tail-feathers of Huon Astrapias are especially valued for such a crest. The white cockatoo-feathers alternating with the black feathers are often replaced by chicken feathers. The showy centre-piece may also consist of a bunch of chicken feathers fringed by some smaller, colourful, more valuable feathers, as red breast-feathers of Vulturine Parrots, of Papuan King-Parrots or of small lorikeets, or small iridescent breast-feathers of Huon Astrapias. The whole crest is also lined on both sides by such small ornamental feathers hiding the attachment of the larger feathers to the frame of the dance hat. (This frame is called menaam kadaat: bird/bones, frame.) In the front and the rear, the hat may be furnished with swaying feather-sticks or feather-strings composed from the same range of smaller feathers. Nokopo men distinguish stiffer, upright elements, that is feather-sticks called danggwan (like any feather), from drooping and swaying elements, that is feather-strings called sirip sirip (sirip means "flower" and/or "seed"). Recently people have begun to replace these smaller colourful feathers of forest-birds by small chicken feathers coloured by commercial dyes. Feather-sticks nowadays often include wire or metal springs to make them bounce while dancing.

A dance-hat has a value of about 10 kina, that is, it is much less expensive than feather-wheels which are only owned by older, important men. Most younger men own one or two such dance-hats.

Feather-wheels are carried attached to poles on the head by single dancers performing kong kaap (ancestor spirit/dancing functions), see also Niles 1992. They are generally called dsakwo, like the Vulturine Parrot whose feathers are the most important component for it. Not all wheels include equal proportions of dsakwo-feathers, and their arrangement is not always the same. Basically there are three types of wheels: dsakwo, with a high proportion of Vulturine Parrot-feathers, yelawot ("mixture"), with part of the Vulturine Parrot-feathers replaced by white cockatoo-feathers, and gogek (Sulphur-crested Cockatoo), with all dsakwo-feathers replaced by cockatoo-feathers. The wheels are rated in this order.

At a dsakwo-wheel the feathers are arranged in concentric rings, alternatingly black, white and red. The red colour is exclusively furnished by the wing-feathers of Vulturine Parrots, white is produced by cockatoo-feathers. For black-coloured elements feathers of several birds may be used: of Palm Cockatoos (saoreng), of hornbills (kangare putok), of Sooty Owls (balum) and nightjars (balum balum) as well as tail-feathers of Vulturine Parrots (dsakwo) and of Huon Astrapias (samun).

Palm Cockatoos and hornbills do not occur on Nokopo territory, their feathers are introduced from lower lying areas and are therefore rare and expensive. Sooty Owls and nightjars are uncommon birds, moreover Sooty Owls are large nocturnal raptors said to hunt marsupials as people do. Skin and feathers of Huon Astrapias are highly valued because Nokopo people like the iridescent colour.

Their value to Nokopo people is based on this quality and not on the scarcity of the birds as Huon Astrapias are quite common in the Nokopo forest (LMMF).

An ideal dsakwo-wheel was described by informants to be composed of the following concentric feather-rows (from the smallest, inner ring to the largest, outer ring): 1. cockatoo- feathers, 2. smaller black wing-feathers of Vulturine Parrot, 3. smaller red wing-feathers of the same bird, 4. large red wing-feathers of Vulturine Parrot and 5., finally long black tail-feathers of this bird. Such a wheel, including little else than Vulturine Parrot-feathers, requires about 10 such birds (which makes for a monetary value of 100-1000 kina, depending on which rate is used as a basis: normal village price or black market price). (cf. also Beehler ,Pratt and Zimmerman 1986: 35 on the endangerment of the Vulturine Parrot by black market practices). Such a wheel was only once described, actual wheels and other described wheels include another full row of white cockatoo- feathers, for instance the concentric rings may consist from the inner ring to the outer ring of the feathers of the following birds: 1. Vulturine Parrot (small and red), 2. Palm Cockatoo (black), 3. Sulphur-crested Cockatoo (white), 4. Vulturine Parrot (large and red), 5. Palm Cockatoo or Huon Astrapia (black).

Normally there should be always five (eventually six) concentric feather-rings forming the wheel and the outmost, largest circle (row 5) is always black, set in contrast to the second-largest circle which should be always red (row 4). Normally this is followed by a wider or narrower white circle (row 3). The two rows occupying the innermost space vary considerably, 1. red and 2. black, 1. white and 2. black, or when there are three innermost circles: 0. white, 1. black, 2. red. One wheel consisted only of red Vulturine Parrot-feathers in the centre, with a band of white cockatoo-feathers in the middle and fringed by a row of dark Sooty Owl-feathers.

Thus, the proportion of Vulturine Parrot-feathers versus feathers of other birds, plus the amount of white feathers used, is responsible for the value of a feather-wheel: the more Vulturine Parrot-feathers it consists of and the less white cockatoo-feathers used between the red and black rings, the more valuable the wheel is. For Nokopo concepts the colours red (gaman) and black (pelin) are most important. White colour (kwak) is only appreciated as a contrast and separating element between the major opposition of black and red.

The Nokopo feather-wheel has a mythical origin and was originally created by the Temiyat-child who emerged in full dance-costume from the pond he is conceived to live in. The Temiyat-child is the son of the river Yaut, to which the black colours are assigned, and of the creek Brak, to which the red colours belong. Both colours have supernatural powers but only when combined accordingly.

Feather-poles called sekan are also used during kong kaap dances, carried above the feather-wheels. The consist of a long, slender bamboo tube spirally wound with feathers of cassowaries (walap), male and female Huon Astrapias (samun and sunumaak) and of Spangled Honey-eaters (tabel gaman). The pole is topped by a disk (called kabeng) and dark green palmlily-leaves. The spiral winding of the pole is called powo and stretches with darker feathers (of samun, male Huon Astrapia and Walap, cassowary) alternate with parts covered by lighter coloured, speckled feathers (of sunumaak, female Huon Astrapia and tabel gaman, Spangled Honeyeater).

Under the term kaap delim all other or unspecified dance-ornaments are subsumed. They usually consist of several different, colourful feathers of varying size inserted into a small stick (of palmwood or bamboo) and wound with string. These single elements may be inserted into arm-bands together

with various plant parts or they are used to additionally decorate larger structures, that is feather-wheels or dance-hats.

When arranging the 21 recorded birds used for feather-ornaments according to their preference and the frequency of their use by people, three groups can be distinguished:

1.Favourites and/or often used include dsakwo (Vulturine Parrot), gogek (Sulphur-crested Cockatoo), samun (male Huon Astrapia), sungu (Papuan Lorikeet) and walap (cassowary). All bird of this group, except samun, play a role in the mythical lore. However, the iride.scent plumage of samun is highly valued. Dsakwo, gokek and sungu display in purest form the three basic colours used by Nokopo people for the visualization of aesthetic concepts: red, black and white. (It is only those three colours for which Nokopo people have abstract terms: gaman red, pelin black, kwak white.) dsakwo and sungu are especially valued as they include the basic colour opposition of black and red. Dsakwo are strikingly patterned black and bright red birds, sungu occur in two colour phases: a red and a dark one. Walap is not considered to be a bird, although morphological relationships are recognized, and there are strong indications that Nokopo people consider cassowaries to possess "souls" similar to human souls (cf. chapter 5).

2. Valued but rarely used birds include balum (Sooty Owl), balum balum (nightjars), dakwalova (Macgregor's Bowerbird), kangare putok (Blyth's Hornbill, kina (male Emperor B.o.P.), mit mit (lorikeets), saoreng (Palm Cockatoo), susum (Papuan King-parrot), tengaak (Eclectus Parrot). Kangare putok, kina, saoreng and tengaak are not indigenous at Nokopo, feathers or skins are imported from lower lying areas. Balum and balum balum are uncommon at Nokopo. Susum are quite fugitive and are only seen when their favourite feeding-trees carry ripe fruit. Dakwalova take a special postion (cf. chapter 6) and it is not clear whether their hunt is traditional or only practiced since missionization. The only incidence of a dakwalova-crest used for ornaments was with the decoration of a stringbag. Mit mit is considered a smaller relative of sungu and is not equally valued.

3. Birds mentioned by informants but not recorded in actual use include bindsindsim (Grey Wagtail), nyat nyat (Superb B.o.P. and Wahnes' Parotia), singkwak (Grass Owl), sunumaak (female Huon Astrapia), tabel gaman (Spangled Honeyeater, yagun (female Emperor B.o.P.), yagun kwadat (? scrub wrens, ? female B.o.P.). All these birds, with the exception of nyat nyat, have rather dull or speckled plumage. Moreover, singkwak is like balum rather uncommon at Nokopo but not such a spectacular hunter (it is said to feed mainly on rodents).

Sunumaak and tabel gaman seem to be used only for the very special purpose of decorating poles attached to the feather-wheels. The reluctant use of the plumage of nyat nyat is - considering the high esteem for iridescent plumage- a riddle. One possible line of explanation is that Superb B.o.P. reside quite close to human settlements and activities. They are frequently seen and heard in the gully at the entrance of the village. Also in other high-altitude areas of Papua New Guinea, villagers spare B.o.P. and other beautiful birds living close to human settlements, because they appreciate their beauty. Simbu people for instance, value highly the display trees close to their villages and will not disturb or kill the displaying birds of paradise (personal communication Jürg Schmid-Kocher), and similar attitudes are reported by Beehler, Pratt and Zimmerman (1986:42) from the upper Bulolo River.

5. Entr'acte: Cassowaries

In March 1987 my 26 year old- field assistant Sendi constructed several trap-types in my house-yard at the village for step by step documentation by photo. He included a trap for cassowaries. While he was working at it, his older brother Noheyu passed by, on his way to the gardens. He came in, checked the trap, found some faults and started to teach Sendi to build it correctly. In former times Sendi would then have been introduced to the correct manipulating actions connected with the setting up of cassowary traps. In 1987, a few days later, his father's brother, a specialist in esoteric matters, called at my house and described this manipulating action to me with Sendi acting as interpreter. The following data are based on this and subsequent talks.

Nokopo people do not consider cassowaries to be part of their category menaam, birds. However, there are indications that they consider cassowaries to have been birds in former times, that is members of the category menaam (cf. the stories about the flowerpecker and the cassowary in chapter 6 and cf. Healey 1985:155).

The general term walap is used to refer to Dwarf Cassowaries (*Casuarius bennetti*) of which two kinds are distinguished, Dum are larger cassowaries with bluish-black feathers, (i.e. adult cassowaries); serang are smaller, with dull brown plumage, that is they are immature.

One older informant recalled a cassowary being hunted when he was a young man, probably about forty years ago, and another man recalled such an incident to have taken place about twenty years ago in a forest area owned by a neighbouring village. It seems that cassowaries were never numerous on Nokopo territory but only migrated to Nokopo warm LMMF at certain times of the year when tree-fruits were abundant. Their favourite food are the fallen fruit of a wild pandan and of the palm *Heterospathe sp.*, plants which are characteristic for the warmer forested areas. Nokopo people further reported cassowaries to be attracted by the fallen fruits of guoman (*Bubbia sp.*) characteristic of LMMF and UMMF, of kombe (*Galbulimima belgraveana*) restricted to LMMF and of the ubiquitous kuya (*Garcinia sp.*) Cassowaries are said to breed farther away in UMMF and undisturbed LMMF, in those areas which are not inhabited by people, on a large structural limestone plateau adjacent to the Yupna valley. For several decades no cassowaries were seen on Nokopo territory. However, the respective hunting techniques and the peculiar habits of cassowaries are still known. In former times the hunt for them was difficult, they were trapped at creeks and rivulets in the forest where they were known to regularly cross. The traps had to be specially prepared by manipulating actions and young men were formally introduced to them. After the introduction of guns, cassowaries were probably shot with these weapons, this might be one of the causes for the disappearnace of cassowaries from Nokopo territory and the densely settled Yupna valley in general. (However, shot guns have probably never played a significant role in Nokopo hunting. In 1987 only one man owned a gun and there was no supply for cartridges. Other, more significant factors for the decrease of cassowary numbers can be seen in the increase of human population connected with intensified pig husbandry and the interdependent enlarged garden territories since Christianization, cf. Kocher Schmid 1991:101-02)

Nokopo people conceive cassowaries to be special creatures and to display behaviour similar to human behaviour (cf. Bulmer 1967:17 for similar concepts of Karam people.). When people try to chase them in the forest, cassowaries are said to perform a manipulating action which causes heavy rains to render impossible any further pursuit. If hit by arrows, cassowaries perform another ma-

nipulating action which makes use of the special properties of substances which people also use for manipulating actions: they search for a distinct worm(?) in the soil and collect some peng peng-plants (*Elatostema microphyllum* and/or *Pilea effusa*) which grow at swampy spots in all forest types. From these ingredients the cassowary makes a paste (called daal daal) and by including one of its feathers activates it, that is performs a spell called kwik, like people do by adding activating substances to daal daal-pastes. By this action, the cassowary disappears, is transformed to peng peng that protects it and heals its wounds. The peng peng prevents the injuries from killing the cassowary, and arrows just fall out. Thus, Nokopo consider it impossible to successfully hunt a cassowary by chasing it. The only promising method is to set up special traps.

Nokopo hunters prepare cassowary traps by manipulating actions. One explanation given for this special preparations claims that they make it impossible for the cassowary to notice the trap set on its path. However, it was also stated that cassowaries cannot be trapped without their consent. Thus, the manipulating actions do not render the trap invisible to the cassowary but force the bird to surrender. It takes five days from the time when the cassowary notices the trap set on its path and knows that it has to die until it will be trapped: on the first day the bird goes back to the place where its mother laid it as an egg, it cries and mourns for one day and sleeps there. The second day the cassowary visits the place to where its mother had dragged it after the egg broke (Nokopo people do not seem to be aware that with cassowaries only males and not females, care for the eggs and the young, Beehler, Pratt and Zimmerman 1986:45), it again cries, mourns and sleeps. The third day the cassowary spends mourning at the place where its mother had left it as an immature bird (a serang with dull brown plumage). The fourth day it visits the area where it spent most of its adult life (dum with black plumage). Again the cassowary cries and mourns but when waking up on the fifth day it is comforted and goes straight into the trap. Thus, the cassowary repeats the four stages of its life (by following the time/space series enclosing its life): egg, fledgling, immature bird, mature bird, before entering the fifth: death and thus the spiritual realm.

When a young man wants to set up his first cassowary-trap, he has to be guided and introduced by a specialist for esoteric matters. Such a specialist is called nandak nandak amen (nandak nandak: wisdom, knowledge, amen: man). This specialist then prepares a paste (called daal daal, daal means to grind, to crush) from the labiate bek, a *Galium sp.* called yirkdaap and black earth pigments nanggem. Another report mentioned -apart from the black earth pigments - different ingredients for this paste: kangaare (*Canarium ?indicum*) which is introduced from the lower sections of the Yupna valley, mangut red earth pigments and musuk, traditional salt. The prepared paste is put onto a leaf of a special kind of cultivated ginger (*?Zingiiber officinalis*) called walap singaam ("cassowary's ginger) or singaam paat ("ginger-trap") and taken to the forest. The prospective cassowary-hunter now defecates and waits until a blow-fly (called kong baal, this is "ancestor spirit fly") is attracted by the smell of the faeces. This animal is then caught and together with scraps from the hunter's thumb-nail and a little bit of his faeces added to the paste. The nandak nandak amen then searches for the tracks of a cassowary and brings back some of this bird's faeces. He adds them to the paste, which is then wrapped into the ginger-leaf and put into the prospective hunter's stringbag. Then both men go together to search for cassowary tracks. There the prospective hunter builds under supervision of the specialist his first cassowary trap. The debris, small scraps of timber and vines, are added to the paste in the stringbag and the specialist teaches the correct spell to utter over it. Then the parcel is attached to a length of the vine isip isip (an *Asclepidiaceae*) and hung into a swift running creek or rivulet, preferably where there is a small waterfall. The small parcel is thus constantly hit by the running water and bounces, this is said to confuse the cassowary's mind so that it goes into the

trap set on its path.

The substances used for the pastes and for the activation have special significance and occupy special positions in Nokopo concepts. The plants bek and yirkdaap are conceived to belong, as the black earth pigment nanggem, to the forest sphere. Both are mainly used by women to dye string and considered to be in female competence. The black earth pigments are colouring matters in male competence and conceived to represent one of the earthly manifestations of one of a mythical pair of brothers. They are carriers of an attracting force called elet elet. The same force is present in the blow-fly, which is called kong (ancestor spirit) baal (fly). This force is seen manifested in the myriads of maggots that each fly produces.

For the other variant of basic paste, red earth pigments mangut belonging to the grassland sphere but also in male competence and representing the earthly manifestation of the other mythical brother are used.. Mangut also contain parts of the attracting force elet elet. It is not combined with plants in female competence but with substances of the seashore: kangare galip nut and musuk traditional salt are obtained from the coast. Nokopo people still claim rights to certain areas of the coast where their ancestors once lived. Both substances were in former times procured by dangerous excursions to the coast. Kangare-nuts are moreover considered to be the souls favourite food and were used to attract soul aspects of people for harming actions, that is homicide by supernatural means called sot kunok (sickness/to seize or to adhere). The hunter's faeces and the scraps of his thumb nail are used to turn the daal daal, the paste, into a kwik, a spell, that is to activate it.

The faeces of the cassowary and the construction debris of the trap add the link to the trap and to the cassowary. That is, the three poles, hunter, prey and trap are linked together by combining substances which were once part of them.

Many manipulating actions make use of distinct ginger cultivars, mainly the leaves and not the rhizomes. Most ginger cultivars used in this way only serve one distinct purpose.

The vine isip isip (an *Asclepidiaceae*) is also used in other contexts: with homicide by supernatural means, sot kunok, and to decorate the moss bales of the kong bayem (ancestor spirit/ to represent) set up at harvest ceremonies to indicate the presence of the ancestor spirits.

The practice described and the ingredients used in it, have strong parallels with practices formerly used to perform homicide by supernatural means. Sot kunok, substances known to be carriers of the attracting force (elet elet), were combined with body remains or secretions of the victim as well as of the performer(s). Food known to attract soul aspects were used as "bait" and the mixture was wrapped into a parcel which was then treated by blows or stabs, tied to prickly tree stems or otherwise mechanically mistreated and finally burned in fire. Thus, the manipulating actions used for setting up cassowary traps show less affinities to "normal" hunting spells used by every Nokopo hunter, before setting out for a nightly hunting trip but to the complicated procedure of homicide by supernatural means. Such actions were performed to harm or kill people by getting hold of soul aspects of the victim and then harming or mistreating them, that is the body of the victim was manipulated by manipulating parts of its soul. By using basically the same procedure to manipulate cassowaries, that is hunt and kill them, Nokopo people seem to attribute to them similar spiritual dimensions as people, although of different quality: it requires the power of water and not of fire to harm or destroy a cassowary's "soul". This motif, the complementarity of cassowaries and people, as well as

the cassowary as a symbol for the wild and undomesticated, seems to be widespread in New Guinea (cf. Bulmer 1967 for the Karam and Healey 1985 for the Maring people).

6. Stories and concepts about birds.

6.1. Stories

6.1.1. The Cassowary and the Flowerpecker.
In former times the cassowary was able to fly and he did not feed on fruit fallen from trees as nowadays but he sat in the crowns of the trees. As he was tall and strong, the other smaller birds had no access to the tree crowns and had to feed on those fruit left by the cassowary and fallen to the ground. The litte bird dit, the Papuan Flowerpecker, did not like the idea, so he put little twigs under his wings and yelled to the cassowary sitting on a tree: "Look, I am doing something new, I break my wings!" The flowerpecker pressed his wings tightly to his body until the twigs broke and it sounded as if his wing bones would break. The cassowary watched and as he noticed that the flowerpecker was still well and obviously happy with his broken wings, he too pressed his wings tightly to the body until they broke. The flowerpecker flew up to the tree and laughed at the cassowary. The cassowary wanted to punish the flowerpecker and started to move his wings, but in doing so he fell down to the ground. There he is still, feeding on fallen fruit left over by the other birds. However, the flowerpecker cannot return to the ground as the cassowary would kill him immediately and he cannot allow even his faeces to drop to the ground as the cassowary would use them for sorcery against him. So he stays on trees, feeding from mistletoes, defaecating onto the branches and thus cultivating the mistletoes, his food.

6.1.2. The Frog, the Cassowary and the Flowerpecker.
The cassowary once decorated the frog kangtung (*Hylophorbus rufescens*) and said to the flowerpecker, dit: "You start dancing and singing!" The flowerpecker did so and the cassowary joined him together with the frog and the three of them held a singing and dancing function. The next day the flowerpecker decorated the frog and told the cassowary to start dancing and singing. The frog kantung in all its finery waited on the road while the flowerpecker urged the cassowary: "I have finished decorating him why don't you hurry up and start singing and dancing?" The cassowary turned around to go and fetch his hand-drum but did not notice the frog on the road, stepped onto it and stamped it into the ground. The flowerpecker turned around: "You have killed the boy, you have stamped him into the ground!" The flowerpecker got very angry, took his bow and shot an arrow right into the knee of the cassowary. Then he dropped the bow and escaped onto a tree. The cassowary yelled at him: "As soon as you defecate, I will take it and kill you by magic!". The flowerpecker answered: "I defecate onto the tree, I do not dare to defecate onto the ground." This he said and he still defecates onto trees, from his faeces new plants grow which carry fruit and the flowerpecker does not return to the ground. The frog kantung still lives in the ground. The hole made by the arrow in the cassowary's knee is still visible.

6.1.3. The Cockatoo and the Flying- fox.
Once the cockatoo and the flying -fox met at a mountain called Nimba. They fed from the bamboo petan (a bamboo of LHF which is used by people to manufacture flutes) which at this time carried fruit (seeds). The place where the bamboo grows is called Abongan. They stayed there both feeding on the bamboo seeds when they were surprised by heavy rain. As the home of the flying- fox was close by, he told the cockatoo: "Brother, my house is close by, let us go there and wait until the

rain is over." He said it and the two went to a cave called tep (rock or stone) kungkung (natural cavity). Inside they made a big fire to sit down and warm up. The flying - fox got sleepy and the cockatoo told him: "Just sleep." So, the flying -fox slept. The cockatoo sat there and heard the flying - fox fart. Before, when there was no rain yet, the flying -fox had eaten a lot and therefore he farted a lot. This made the cockatoo angry so he woke the flying- fox up and told him." I reckon you ate too much this morning therefore you fart such a lot." The flying fox was ashamed and told the cockatoo: "I reckon you do not have an arse hole that you blame me." The flying- fox was really angry, sat down again, then went to sleep again and farted again. The cockatoo got very cross because before, when he had woken up the farting flying -fox, he was insulted, therefore he brooded and got an idea: "Now you are fast asleep and you will not notice anything, I will take a needle and some thread and then sew up your colon ,then you will not be able to fart anymore." He did as he had planned and sewed up the colon of his friend. When he had finished he was finally able to sleep. The the flying -fox woke up and shook the cockatoo:" Look, the rain is over!" The cockatoo did not answer as he still felt insulted by the words of the flying -fox. Thus he stayed in the cave while the flying -fox went out to watch whether the rain had really stopped. When the flying- fox had left the shelter he felt the need to defecate, therefore he proceeded to his toilet place. He tried to defecate but it did not work. He looked down and noticed that his colon was sewed up and tried to remove the thread. He tried until dusk but did not succeed.

Very carefully he walked back to the cave and started to bash the cockatoo. The cockatoo fought back: both were angry and they had a really big fight. The flying- fox took ashes from the fire and threw them over the cockatoo. The cockatoo was all white from the ashes and yelled at the flying-fox: "I am glad that I sewed up your colon, you will not be able to defecate anymore, you will only be able to drink water, solid food you will have to vomit again." The flying- fox was so angry that he chased the cockatoo out of the cave. Afterwards the flying- fox was so ashamed of his sewn up colon, that he separated from his lineage: he stays in his cave during the day and only leaves it at night. Therefore he is nocturnal and eats his food at night. He has difficulties when eating: he only drinks the juice of his food and vomits the solid parts. Luckily enough the cockatoo had only sewn up his colon and not also his urethra. Once the cockatoo and the flying fox were good friends, then they separated and now both keep to themselves. This is the story of the cockatoo and the flying fox.

It is well documented for many PNG cultures that in animal taxonomy, flying -foxes, bats and cassowaries take a peculiar position. Cassowaries are not considered to be birds in the true sense (cf. Bulmer 1967). However, bats and flying- foxes (and sometimes also sugargliders) are often included in the same taxonomic category as birds. Such a taxonomic category includes all flying, furred or feathered creatures ,while the flightless cassowary is set apart in a category of its own (cf. Dwyer 1984:323 for Rofaifo people or Dwyer & Hyndman 1983:891 for Wopkaimin people).

Nokopo animal taxonomy differs from this general pattern as there are separate categories for birds (menaam), cassowaries (walap) as well as for bats and for flying -foxes (dsigek and mangot). In spite of these separate categories there are relations recognized between birds, flying -foxes and cassowaries which are well illustrated by the preceding three stories. According to these stories, flying -foxes as well as cassowaries have once been birds. Their pecularities noticed nowadays which separate them from true birds have been caused by birds: the cassowary is flightless and the flying- fox cannot defecate. (For similar concepts held by Maring- people see Healey 1995:155)

6.1.4. Dancing Birds.
"The ant kwata who was actually a man, wanted to arrange a kong kaap in the forest. He first decorated the tree-fern daungga (*Dicksonia sp.*), then other trees came and wanted to participate as well: babem (*Cyathea sp.*, another tree-fern), makem (*Osmoxylon sp.*), kel (*Zanthoxylum conspersipunctatum*) and other tree-ferns with thorns, kame, bukwak, kwikwik and others. Only one of these trees was not prickly: gwok gwok (*Debregeasia sp.*). Then some women came to attend: kina and yagun (both Emperor Bird of Paradise), sungu (Papuan Lorikeet,), mit mit (Yellow- or Orange-billed Lorikeet), samun and sinumaak (both Huon Astrapia) and dsakwo (Vulturine Parrot). All these women came to watch the men dance. They saw that all men except one had prickly skin and they were scared to embrace them. But one man had smooth skin, the tree-men gwok gwok. Thus, all the women went to embrace him, the bird-women sat down on him so that he was bent down by the heavy load. Therefore the gwok gwok tree is still bent. The ant-man kwata was so embarrassed that he disappeared into the ground. Some of the decoration he had used for the daungga was still in his hands. He dug himself into the ground and then pushed the decoration out again." The birds mentioned all have colourful feathers that are used for body ornaments. The ant kwata that occurs in LHF builds small but high mounds.

6.2. Mythical fragments
Birds are often mentioned or play prominent roles in the mythical lore of several lineages. They are personifications of ancestors.

6.2.1 Papuan Lorikeets, lineage Bram, Nokopo Village.
Papuan Lorikeets in their red and black colour phases respectively are one of the earthly representations of a pair of mythical brothers who brought fertility and reproduction to the world. Their wives are conceived to daum-umbrella trees (*Schefflera sp.*) from which these birds feed A similar story was recorded from Mek village (lineage Meko). However, there the older brother is represented by the Vulturine Parrot and the younger brother by the Papuan Lorikeet. Their wives turn into a dubit-*Freycinetia* and a *Dimorphantera sp.* respectively.

6.2.2 Hornbill, lineage Gata, Nokopo village.
The bush spirit Takwai can be seen by people not only in the usual disguise of bush spirits as a human being but also in the shape of a fearful creature consisting of a hornbill with the body of a python. The hornbill also plays a role in the lore of the villages of the lower section of the Yupna valley. They depict this bird on planks used as dance ornaments.

6.2.3 Lesser Melampitta, lineage Gabangon, Nokopo village.
The migrating lineage Gabangon was followed by their ancestor in the shape of a Lesser Melampitta to their present settlement site.

6.2.4 Cockatoo and Vulturine Parrot, lineage Salsal, Kangolut and Nokopo villages.
The Salsal and Mionkin lineages claim the Vulturine Parrot as mythical ancestor. His parents are the cockatoo and a cannibalistic woman, who later turned into a feral pig.

6.2.5 Female Spotted Berrypecker, village Talangs (and also Bambu, Nankina valley).
A female ancestor-being turned into a Spotted Berrypecker. While feeding on the fruit of the mangpak-figtree (*Ficus sterrocarpa*) she was on her own request shot by her grandson. He filled the bird's blood into bamboo tubes and heated them on the fire. The tubes cracked open, and according

to the different kinds of bamboo, different people emerged.

6.3. Symbols and omens

6.3.1. The Torrent Flycatcher.
The villages Wadabong, Narawong, Kwembum, Bonkiman and Windiluk of the lower section of the Yupna valley traditionally perform a distinct dance-cycle. This cycle is called puak and is said to also include the villages of the adjacent Domong language group which are situated on a sloping structural plateau next to the Yupna valley, as well as parts of the adjacent coastal area.

Such a dance-cycle, binding several villages to each other, takes about a year to complete. One month after the other the dance is staged in another village. It includes the exchange of boys between the villages who take in the dance the role of woman (who, following marriage regulations, usually marry out of their village. Thus, this exchange of boys most probably follows the pattern of intermarriage between the villages). When, after the completion of a puak-cycle, the boys return to their home villages, pig and betelnut is paid for their performance. An important integrating factor during these events is the song of the booman (Torrent Flycatcher) which is performed by all participants at the closing of the single stages in each village. This bird is known to follow the Yupna river and is considered a symbol of the unity of the villages of both riverbanks. The song is also used for communication across the river between the different villages: when this song is heard, people of the different villages meet at the Yupna river. Informants reported in 1987 that the last puak dance-cycle had taken place around 1984/85. The dance was staged again in January 1992 for the Nayudos Cultural Show held at Teptep, the administrative headquarters of the Yupna area.

6.3.2. Macgregor's Bowerbird and Vulturine Parrot.
Male Macgregor's Bowerbirds build and decorate bowers where they display in order in order to attract females (Everett 1987:22). Nokopo people do not consider the bird's bower to be part of its mating behaviour but consider it to be the bird's ceremonial house where it initiates its young ones. To them, the bird's behaviour is a basis as well as a reflection of their own cultural practices. Consequently Nokopo people used to rebuild such a bower within the men's house enclosure and to present it to boys passing the second stage of initiation, thus demonstrating to them their close association with the forest and its creatures.

Male Macgregor's Bowerbirds build a maypole type bower. "It is a saucer-shaped structure with a central column of twigs placed around the trunk of a sapling. The 'saucer', with its elevated rim, is of moss compacted to form a hard smooth surface. The base of the sapling is often surrounded by moss and above this interlocking twigs around the trunk may rise two metres or more, the upper portion comprising longer twigs placed in a more haphazard manner thereby making the column wider toward the top. The lower portion of the column is decorated with pieces of lichen, insect remains or vegetable matter hung from the ends of the twigs. Placed in the 'moss' or around the rim of the 'saucer', sometimes outside it, are pieces of charcoal, berries, fungi or stones. (Cooper and Forshaw 1977: 235) Nokopo descriptions of the bower of Macgregor's Bowerbird match this ornithologist's description. However, Nokopo people report red ginger berries and dark pepper-vine leaves as ornaments introduced by birds to the 'saucer'.

Nowadays, with ceremonial men's houses and male initiation abandoned, the buyang is also lost. However, Schmitz (1963: 133-135 + plate 1) reports a similar ephemeral display with Pasum people living on the southern watershed of the Finisterre ranges. This display, called "show-altar" by Schmitz, is constructed by the Pasum people for the circumcision of boys and represents as for the Nokopo buyang, the bower of a bower bird. For Pasum people, the hunt on marsupials has special significance and only circumcised males are allowed to eat marsupial meat. Nokopo people have similar concepts which focus not on the possum but on the "Mother of the Large Game Mammals" who is thought to appear to the lonely hunter in the shape of an especially large mountain or silky cuscus with mutilated paws (cf. Kocher Schmid n.d.). Nokopo people did not recall any former food taboos for uninitiated males concerning marsupial meat but there is a vague concept that women should not eat meat of game mammals hunted in a certain area of the forest near a pond where the "Mother of the Large Game Mammals" is thought to live.

There are enough parallels to allow the assumption that the Nokopo buyang probably looked quite similar to the Pasum "show-altar" photographed and published by Schmitz (1963: plate 1). Unfortunately it is an early colour photo of poor technical quality and thus not all of the plant materials used are identifiable.

The sapling, around which the bird builds the 'maypole', is represented by a stick topped with green and white mottled palm-lily(?) leaves. The column itself is faithfully copied with interlocking twigs. However, the 'saucer' is built much larger than the original and consists of about a dozen concentric rings formed by alternatively dark, bright and red coloured earth and plant materials. Its design recalls the feather-wheels carried by Nokopo kong kaap-dancers (cf. chapter 4). Similar to the original, the base of the stick representing a sapling, is surrounded by moss and decorated with red berries(?). The perimeter is encircled by fern fronds, large simple leaves and other, unidentifiable plant parts. The leaves of four shoots of a scrambling pandan (*Freycinetia sp.*) were removed, leaving only the red and yellow coloured fleshy bracts, enclosing the terminal inflorescences. The resulting bare sticks topped by coloured leaves are inserted in the ground encircling the layout described above. The use of *Freycinetia*-bracts for decoration is especially noteworthy in this context. The same *Freycinetia sp.* (or a very similar *sp.*) which is called dubit by Nokopo people, is said to be the favourite food of the Vulturine Parrot , which provides feathers for Nokopo people to assemble as feather-wheels in a design strikingly similar to the concentric coloured rings laid out by Pasum people. Here the probable similarities with the Nokopo buyang end, as Passum people further add four life-sized figures sitting and standing around the bower, representing two mythical brothers and their wives. Bowerbirds seem to have special significance in many Papua New Guinea cultures (cf. Hirsch 1987 or Sillitoe 1988).

6.3.3. Fantails
Fantails- silek are omen-birds. When a fantail is seen in an atypical habitat, that is in a place where this bird usually does not occur, this is taken as an omen (taowak) called bemsot taowak (omen of the dead man). It indicates that there are unsettled grievances between the person spotting the bird and a recently decreased person. Such unsettled grievances are considered to be the reason for economic failures and other troubles. Such a sighting of a fantail in an atypical habitat, explains and confirms the reason for personal mischief.

6.3.4. Cuckoos
Trerut- cuckoos are said to be heard in early morning just before dawn. Their voice is taken as a

sign for an attempt of mawom, that is an attempt of a killing by supernatural means. The cuckoos voice is also taken for a sign of imminent death as well as of troubles arising from pigs escaping their enclosure and damaging the gardens of other people.

6.3.5 Rufous-backed Honeyeater
The plaintive calls of this bird are a symbol for mourning and death. Nokopo people do not eat Rufous-backed Honeyeaters, because, as they explained, the meat is watery and thus inedible. However, their close association with death might be also a reason for the rejection of Rufous-backed Honeyeaters as food for people.

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8. Lists

8.1. List of birds arranged in alphabetical order of Nokopo designations

Nokopo Name	Common Name	Scientific Name
abangoi	Black-throated Honeyeater	*Lichenostomus subfrenatus*
baina	Goshawk	*Accipiter sp*
balum	Sooty Owl	*Tyto tenebricosa*
balum balum	Large-tailed Nightjar	*Caprimulgus macrurus*
balum balum	Mountain Nightjar	*Eurostopodus archboldi*

baol	Black-billed Cuckoo-dove	*Macropygia nigrirostris*
baol	Brown Cuckoo-dove	*M. amboinensis*
bindsindsim	Grey Wagtail	*Motacilla cinerea*
boomam	Torrent Flycatcher	*Monachella muelleriana*
butsip	Hooded Mannikin	*Lonchura spectabilis*
buya	Rufous-backed Honeyeater	*Ptiloprora guisei*
buya	Honeyeaters	*Ptiloprora. spp*
dakwalova	Macgregor's Bowerbird	*Amblyornis macgregoriae*
dakwalova	Wahnes' Parotia	*Parotia wahnesi*
dakwat	Bronze Ground-dove	*Gallicolumba beccarii*
dap dap	Pygmy Lorikeet	*Charmosyna wilhelminae*
dap dap	Goldie's Lorikeet	*Trichoglossus goldiei*
dap dap	Plum-faced Lorikeet	*Oreopsittacus arfaki*
darek	Scrub wrens	*Sericornis spp*
darek	Mouse-warblers	*Crateroscelis spp*
darek bam	Mountain Mouse-warbler	*C. robusta*
dep gamen	Rufous-naped Whistler	*Pachycephala rufinucha*
dit	Papuan Flowerpecker	*Dicaeum pectorale*
dsakwo	Vulturine Parrot	*Psittrichas fulgidus*
dsikwamen	King quail	*Coturnix chinensis*
dsingndet	Black Monarch	*Monarcha axillaris*
dsirik pelit	Richard's Pipit	*Anthus novaseelandiae*
gemat	White-breasted Fruit-dove	*Ptilinopus rivoli*
gengaarat	Rufous Owl	*Ninox rufa*
gokek	Sulphur-crested Cockatoo	*Cacatua galerita*
golda taakwan	Slaty-chinned Longbill	*Toxorhampus poliopterus*
gurung menaam	White-eyes	*Zosterops spp*
gwangget	White-faced Robin	*Tregellasia leucops*
gwangget	Mountain Peltops	*Peltops montanus*
gwangget	Canary Flycatcher	*Microeca papuana*
gwaok madep	Frogmouths	*Podargus spp*
gwaok mondsin	Owlet-nightjars	*Aegotheles spp*
gwaok mondsin	Mountain Owlet-nightjar	*A. albertisi*
gworek	Golden-headed Cisticola	*Cisticola exilis*
gworek	Tawny Grassbird	*Megalurus timoriensis*
kabekabet	Dwarf Honeyeater	*Oedistoma iliolophus*
kalasip	Glossy swiftlet	*Collocalia esculenta*
kalasip madep	Tree-swift	*Hemiprocne mystacea*
kalasip madep	Pacific Swallow	*Hirundo tahitica*
kanaarem	Rufescent Imperial Pigeon	*Ducula chalconata*
kanaarem	Wompoo Fruit-dove	*Ptilinopus magnificus*
kanaarem madep	New Guinea Bronzewing	*Henicophaps albifrons*
kanaarem mondsin	Emerald Ground-dove	*Chalcophaps indica*
kanek	Modest Tiger-parrot	*Psittacella modesta*
kanek	Red-breasted Pygmy parrot	*Micropsitta bruijnii*
kangare putok	Blyth's Hornbill	*Rhyticeros plicatus*
karanoknok	Goshawk	*Accipiter sp*

karanoknok	Little Eagle	*Hieraaetus morphnoides*
kina	Emperor B.o.P. , male	*Paradisaea guilielmi*
kindsilim	Blue grey Robin	*Peneothello cyanus*
ko	Buerger's Goshawk	*Accipiter buergersi*
ko	Meyer's Goshawk	*A. meyerianus*
kobak	Canary Flycatcher	*Microeca papuana*
kobak	Green-backed Robin	*Pachycephalopsis hattamensis*
kungaak	Forbes Forest Rail	*Rallina forbesi*
kwanamoyem	Spotted Berrypicker, female	*Rhamphocharis crassirostris*
kwidnaak	Long-tailed Shrike	*Lanius schach*
leb leb	Stout-billed Cuckoo-shrike	*Coracina caeruleogrisea*
leb leb	Boyer's Cuckoo-shrike	*C. boyeri*
lekdadat	Garnet Robin	*Eugerygone rubra*
mit mit	Yellow-billed Lorikeet	*Neopsittacus musschenbroekii*
moyem	Fantailed Berrypecker	*Melanocharis versteri*
moyem	Mid-mountain Berrypecker	*M. longicauda*
moyem	Streaked Berrypecker	*M. striativentris*
moyem	Spotted Berrypecker, male	*Rhamphocharis crassirostris*
muguguk	Variable Pitohui	*Pitohui kirhocephalus*
muguguk	Hooded Pitohui	*P. dicrous*
nawa menaam	Tawny Grassbird	*Megalurus timoriensis*
nawa menaam	Golden-headed Cisticola	*Cisticola exilis*
num num	Rufous Woodcock	*Scolopax saturata*
nyiat nyiat	Wahnes' Parotia	*Parotia wahnesi*
nyiat nyiat	Superb Bird of Paradise	*Lophorina superba*
nyingkok	Belford's Melidectes	*Melidectes belfordi*
nyingkok	Cinnamon-browed Melidectes	*M. ochromelas*
nyingkok	Yellow-browed Melidectes	*M. rufocrissalis*
nyingwaol	Pied Chat	*Saxicola caprata*
olong	Huon Melidectes	*Melidectes foersteri*
pamteng	Wattled Brush-turkey	*Aepypodius arfakianus*
pamteng	Common Scrubfowl	*Megapodius freycinet*
pelesigut	Island Leaf-warbler	*Phylloscopus trivirgatus*
pikwi	Great Cuckoo-dove	*Reindwardtoeana reinwardtii*
pisisirip	Torrent Lark	*Grallina brujini*
pisisirip	White-shouldered Fairy-wren	*Malurus alboscapulatus*
pisisot	Ornate Melidectes	*Melidectes torquatus*
piyam	Blue-faced Parrot-finch	*Erythrura trichroa*
pulu madep	Brown Quail	*Coturnix australis*
pulu mondsin	King Quail	*C. chinensis*
samun	Huon Astrapia male	*Astrapia rothschildi*
samun kwawat	Huon Astrapia female	*A. rothschildi*
saoreng	Palm Cockatoo	*Probosciger aterrimus*
sengaam	Whistlers	*Pachycephala spp*
sengaam	Mottled Whistler	*Rhagologus leucostigma*
serang	Meliphaga	*Meliphaga sp*
silek gaman	Dimorphic Fantail	*Rhipidura brachyrhyncha*

silek kwak	Dimorphic Fantail	*R. brachyrhyncha*
silek pelin	Black Fantail	*R. atra*
singkwak	Grass Owl	*Tyto capensis*
singtul	Friendly Fantail	*Rhipidura albolimbata*
singtul kwak	Rufous Fantail	*R. rufifrons*
sirek sirek	Friarbird	*Philemon spp*
sungu	Papuan Lorikeet	*Charmosyna papou*
sunumaak	Huon Astrapia female	*Astrapia rothschildi*
susum	Papuan King -parrot	*Alisterus chloropterus*
tabal gaman	Spangled Honeyeater	*Melipotes ater*
talabusit	Black-breasted Boatbill	*Machaerirhynchus nigripectus*
tangwaol	Torrent Flycatcher	*Monachella muelleriana*
tangwaol	Great Wood-swallow	*Artamus maximus*
taowyeng	Red-collared Myzomela	*Myzomela rosenbergii*
taowyeng	Elfin Honeyeater	*M. adolphinae*
taowyeng gaman	Red Myzomela	*M. cruentata*
tengaak	Eclectus Parrot	*Eclectus roratus*
tengaak	Black-capped Lory	*Lorius lory*
toa kwak	Black-collared Brushturkey	*Talegalla jobensis*
toa pamteng	Common Scrubfowl	*Megapodius freycinet*
tomo long	Forest Kingfisher	*Halycon macleayii*
tomo long	Sacred Kingfisher	*H. sancta*
tovat	Gurney's Eagle	*Aquila gurneyi*
tovat	New Guinea Harpy-eagle	*Harpyopsis novaeguineae*
tovat	Long-tailed Buzzard	*Henicopernis longicauda*
trerut	Fan-tailed Cuckoo	*Cacomantis flabelliformis*
yararum	Cuckoos and koels	*Cacomantis spp.*
yirum	Ducks	*Anas spp.*
yoyo	Fruit-doves	*Ptilinopus spp.*
yoyo	Pigeons	*Ducula spp.*/ Papuan Mountain Pigeon

8.2 List of foodplants for birds

Data on foodplants of birds were obtained by direct enquiries when discussing birds with informants but also in separate contexts when discussing the respective plants. Birds marked with one asterisk (*) were assigned to the respective plant in both contexts, birds marked with two asterisks (**) were by informants designated as "papa tru", that is the "owner" or principal user of the respective plant.

Ubiquitous plants: U (in grassland as well as in forest and over a wide altitudinal range)

Dodonaea viscosa: misol	susum*, Papuan King-parrot tangwaol, ? Great Wood-swallow
Ficus sp.: kotengat	gemat, White-breasted Fruit-dove

	kwanamoyem, Spotted Berrypecker (fem) sirek sirek, friarbird
Nothocnide melastomatifolia: laak kwak	dakwalova, Macgegror's Bowerbird and Wahnes' Parotia
Schefflera sp.: wabewabe	moyem, berrypeckers sengaam, Mottled Whistler sirek sirek, friarbird tabel gaman, Spangled Honeyeater
Gramineae: soliling	butsip, mannikins
Loranthaceae: dit kok	dit**, Papuan Flowerpecker

Lowland hill forest zone (after Paijmans 1975): LHF (below 1400 m ASL)

Canarium sp.: kangare	kangare putok**, Blyth's Hornbill saoreng, Palm Cockatoo tengaak,Eclectus Parrot
Cocos nucifera: silbat	tengaak,Eclectus Parrot
Intsija sp.: ton	saoreng, Palm Cockatoo
Pandanus conoideus: kamep	kina, Emperor B.o.P. (male) yagun, Emperor B.o.P. (fem)
Zingiberaceae: ten	golda taakwan, Slaty-chinned Longbill
- :makaare	muguguk** Variable Pitohui

Montane forest in general: MF, including LMF, LMMF and UMMF (above 1400m ASL)

Acalypha sp.: brap	abangoi*, Black-throated Honeyeater dap dap*, small lorikeets nyingkok*, melidectes pisisot*, Ornate Melidectes taowyeng*, myzomelas buya, Rufous-backed Honeyeater mit mit, Yellow-billed Lorikeet sungu, Papuan Lorikeet
Ardisia sp., *Bubbia clemensiae*: dang dakngok	gemat*, White-breasted Fruit-dove kanaarem, Rufescent Imperial Pigeon
Cerbera floribunda: dsigek	abangoi, Black-throated Honeyeater

	taowyeng, myzomelas
Conandrium sp., Rapanea *sp.*: dsayeng	baol, Black-billed Cuckoo-dove gemat, White-breasted Fruit-dove
Cypholophus macrocephalis: kaat kaat	sengaam**, Mottled Whistler moyem, berrypeckers
Debregeasia sp.: gwok gwok	sengaam, Mottled Whistler
Elaeocarpus spp.: eval	abangoi*, Black-throated Honeyeater dap dap*, small lorikeets nyingkok*, melidectes pisisot*, Ornate Melidectes taowyeng*, myzomelas buya, Rufous-backed Honeyeater dakwalova, Macgregor's Bowerbird and Wahnes' Parotia mit mit, Yellow-billed Lorikeet serang, Mountain Meliphaga sungu, Papuan Lorikeet
Fagraea sp.: bi/gaguk gaguk	abangoi, Black-throated Honeyeater buya, Rufous-backed Honeyeater nyingkok, melidectes taowyeng, myzomelas
Ficus gul: kildsik	gemat, White-breasted Fruit-dove kwanamoyem, Spotted Berrypecker (fem) moyem, berrypeckers sirek sirek, friarbird
Garcinia sp.: kuya	abangoi, Black-throated Honeyeater nyingkok, melidectes (walap, cassowary)
Gardenia sp.: walaut	muguguk, Variable Pitohui
Homalanthus novoguineensis: gurung	gurung menaam**, white-eyes baol*, Black-billed Cuckoo-dove dakwat*, Bronze Ground-dove sengaam*, Mottled Whistler moyem, berrypeckers kobak, ?Canary Flycatcher, gerygone tangwaol, ?wood-swallow yagun kwadat, ?scrub wrens

Kibara bullata: gaknga	gemat, White-breasted Fruit-dove
Kibara papuana: tumbung	gemat**, White breasted Fruit-dove kanaarem, Rufescent Imperial Pigeon tabel gaman, Spangled Honeyeater
Pipturus argenteus: komin	moyem*, berrypeckers sirek sirek*, friarbird gemat, White-breasted Fruit-dove gurung menaam,, white-eyes kabekabet, Dwarf Honeyeater kina, Emperor B.o.P. (male) kobak, ?Canary Flycatcher, gerygone kwanamoyem, Spotted Berrypecker (fem) sengaam, Mottled Whistler tabel gaman, Spangled Honeyeater yagun, Emperor B.o.P. (fem) yagun kwadat, ?scrub wrens
Pittosporum ?ramiflorum: mata	dap dap*, small lorikeets mit mit*, Yellow-billed Lorikeet sungu*, Papuan Lorikeet taowyeng*, myzomelas abangoi, Black-throated Honeyeater buya, Rufous-backed Honeyeater dit, Papuan Flowerpecker golda taakwan, Slaty-chinned Longbill nyat nyat, Wahnes ' Parotia and Superb B.o.P. nyingkok, melidectes olong, Huon Melidectes pikwi, Great Cuckoo-dove pisisot, Ornate Melidectes serang, Mountain Meliphaga
Psychotria sp.: giwan	gemat*, White-breasted Fruit-dove kanaarem*, Rufescent Imperial Pigeon nyingkok, melidectes sungu, Papuan Lorikeet tabel gaman, Spangled Honeyeater taowyeng, myzomelas
Saurauia tugul: dsamba	baol, Black-billed Cuckoo-dove gemat, White-breasted Fruit-dove pisisot, Ornate Melidectes
Schefflera cf. *simbuensis*: tepma si	sungu**, Papuan Lorikeet abangoi*, Black-throated Honeyeater

	buya*, Rufous-backed Honeyeater dap dap*, small lorikeets mit mit*, Yellow-billed Lorikeet pikwi*, Great Cuckoo-dove samun*, Huon Astrapias (male) sunumaak*, Huon Astrapias (fem) serang*, Mountain Meliphaga taowyeng*, myzomelas baol, Black-billed Cuckoo-dove gwangget, Mountain Peltops nyingkok, melidectes olong, Huon Melidectes tabel gaman, Spangled Honeyeater
Syzygium sp.: gasu	abangoi*, Black-throated Honeyeater dap dap*, small lorikeets nyingkok*, melidectes pisisot*, Ornate Melidectes taowyeng*, myzomelas buya, Rufous-backed Honeyeater mit mit, Yellow-billed Lorikeet sungu, Papuan Lorikeet
Rubiaceae (?): dsamben	(as *Syzygium sp.*: gasu)
Rutaceae: dsimbe	moyem*, berrypeckers sengaam, Mottled Whistler tabel gaman, Spangled Honeyeater
-: abendam	kanaarem**, Rufescent Imperial Pigeon gemat, White-breasted Fruit-dove yoyo, migrating fruit doves and pigeons, Papuan Mountain Pigeon
-: beldadat	gemat*, White-breasted Fruit-dove kanaarem*, Rufescent Imperial Pigeon yoyo* migrating fruit doves and pigeons, Papuan Mountain Pigeon
- : map	abangoi, Black-throated Honeyeater mit mit, Yellow-billed Lorikeet nyingkok, melidectes sungu, Papuan Lorikeet taowyeng, myzomelas

Lower montane forest: LMF (1400-1800 m ASL)

Arthrophyllum macranthum and *Polyscias belensis*: bolak teven	gemat, White-breasted Fruit-dove dakwalova, Macgregor's Bowerbird nyat nyat, Wahnes' Parotia and Superb B.o.P. pikwi, Great Cuckoo-dove golda taakwan, Slaty-chinned Longbill
Cyrtandra sp.: buya wanda-mondsin	
Dacrycarpus sp.: moom si	gemat, White-breasted Fruit-dove kanaarem, Rufescent Imperial Pigeon yoyo, migrating fruit doves and pigeons, Papuan Mountain Pigeon
Elaeagnus sp. and *Alangium biflora*: esal	susum*, Papuan King-parrot
Euodia crispula and *Euodia spp.*: gen	dakwat, Bronze Ground-dove dap dap, lorikeets gurung menaam, white-eyes sengaam, Mottled Whistler tabel gaman, Spangled Honeyeater
Ficus sterrocarpa: mangpak	kwanamoyem**, Spotted Berrypecker (fem) gemat*, White-breasted Fruit-dove samun*, Huon Astrapias (male) sunumaak*, Huon Astrapias (fem) tabel gaman*, Spangled Honeyeater dakwalova, Macgregor's Bowerbird dsakwo, Vulturine Parrot kanaarem, Rufescent Imperial Pigeon sirek sirek, friarbird
Ficus sp.: tarang	gemat, White-breasted Fruit-dove kanaarem, Rufescent Imperial Pigeon
Freycinetia sp.: dubit	dsakwo**, Vulturine Parrot nyat nyat, Wahnes' Parotia and Superb B.o.P.
Harpulia ramiflora, Harpulia sp., Elattostachys obli-quinensis: kabet kabet	nyat nyat*, Wahnes' Parotia and Superb B.o.P. dakwalova, Macgregor's Bowerbird and

	Wahnes' Parotia kina, Emperor B.o.P. (male) yagun, Emperor B.o.P. (fem) yagun kwadat, ?scrub wrens
Lithocarpus ?brassii: nomep	tangwaol, ?wood-swallow
Macaranga sp.: eletem	dap dap, small lorikeets mit mit, Yellow-billed Lorikeet
Melatostema sp.: mengkak	moyem*, berrypeckers sengaam, Mottled Whistler
Mussaenda riddleyana: gogek	buya, Rufous-backed Honeyeater
Pandanus sp.: dsaal	gwangget, Mountain Peltops
Pittosporum sp.: waumung	nyat nyat, Wahnes' Parotia and Superb B.o.P.
Podocarpus neriifolius: yaring	gemat, White-breasted Fruit-dove kanaarem, Rufescent Imperial Pigeon nyat nyat, Wahnes' Parotia and Superb B.o.P.
Psychotria sp.: yurang kadaat	gemat, White-breasted Fruit-dove
Sabia pauciflora: naap teven	moyem, berrypeckers muguguk, Variable Pitohui nyat nyat, Wahnes' Parotia and Superb B.o.P.
Schefflera sp.: daum	abangoi, Black-throated Honeyeater buya, Rufous-backed Honeyeater dap dap, small lorikeets mit mit, Yellow-billed Lorikeet samun, Huon Astrapias (male) serang, Mountain Meliphaga sungu, Papuan Lorikeet taowyeng, myzomelas
Schefflera sp.: wiwi	abangoi, Black-throated Honeyeater baol, Black-billed Cuckoo-dove dakwalova, Macgregor's Bowerbird and Wahnes' Parotia pikwi, Great Cuckoo-dove

	pisisot, Ornate Melidectes sengaam, Mottled Whistler taowyeng, myzomelas
Sloanea forbesii: kinamen	abangoi, Black-throated Honeyeater nyingkok, melidectes pisisot, Ornate Melidectes taowyeng, myzomelas
Smilax ovatolanceola: baga-baga	gemat, White-breasted Fruit-dove nyat nyat, Wahnes' Parotia and Superb B.o.P.
Timonius sp.: kabun kwak	taowyeng, myzomelas
Vaccinium sp.: isirisit	gemat, White-breasted Fruit-dove kanaarem, Rufescent Imperial Pigeon sengaam, Mottled Whistler tabel gaman, Spangled Honeyeater
Vaccinium sp.: pelit	pisisot, Ornate Melidectes taowyeng, myzomelas
Zingiberaceae: yomaka	golda taakwan**, Slaty-chinned Longbill
-: daap daat	gurung menaam, white-eyes kabet kabet, Dwarf Honeyeater sirek sirek, friarbird
-: danyit kok	gurung menaam*, white-eyes dakwalova, Macgregor's Bowerbird and Wahnes' Parotia sengaam, Mottled Whistler
-: gemat dsaap	gemat**, White-breasted Fruit-dove sirek sirek, friarbird
-: gwaopba	abangoi, Black-throated Honeyeater taowyeng, myzomelas
-: gwol sirak	gemat, White-breasted Fruit-dove tabel gaman, Spangled Honeyeater
-: kaluk	baol, Black-billed Cuckoo-dove moyem, berrypeckers sungu, Papuan Lorikeet tabel gaman, Spangled Honeyeater

-: kok pakpak	(walap, cassowary)
-: kwanguldung	baol*, Black-billed Cuckoo-dove dakwalova*, Macgregor's Bowerbird and Wahnes' Parotia gemat*, White-breasted Fruit-dove kanaarem*, Rufescent Imperial Pigeon sunumaak, Huon Astrapias (fem) tabel gaman, Spangled Honeyeater yoyo, migrating fruit-doves and pigeons, Papuan Mountain Pigeon
-: minam	gemat, White-breasted Fruit-dove kanaarem, Rufescent Imperial Pigeon muguguk, Variable Pitohui yoyo, migrating fruit-doves and pigeons, Papuan Mountain Pigeon

Mid-montane forest in general: MMF , including LMMF and UMMF (above 1800 m ASL)

Alpinia conglomerata, *A.sp*, *A.* cf. *peekelii*: dsotal	abangoi*, Black-throated Honeyeater buya*, Rufous-backed Honeyeater golda taakwan*, Slaty-chinned Longbill nyingkok*, melidectes taowyeng*, myzomelas mit mit, Yellow-billed Lorikeet pisisot, Ornate Melidectes olong, Huon Melidectes sungu, Papuan Lorikeet
Bubbia sp.: guoman	(walap*, cassowary), gemat, White-breasted Fruit-dove kanaarem, Rufescent Imperial Pigeon mit mit, Yellow-billed Lorikeet sungu. Papuan Lorikeet
Carpodetus sp.: womad	baol*, Black-billed Cuckoo-dove samun*, Huon Astrapias (male) sirek sirek*, friarbird sunumaak*, Huon Astrapias (fem) abangoi, Black-throated Honeyeater buya, Rufous-backed Honeyeater gemat, White-breasted Fruit-dove nyat nyat, Wahnes' Parotia and Superb

	pisisot, Ornate Melidectes sungu, Papuan Lorikeet tabel gaman, Spangled Honeyeater taowyeng, myzomelas
Ficus calopilina: gep	kanek*, pygmy-parrot (tiger-parrot) abangoi, Black.throated Honeyeater mit mit, Yellow-billed Lorikeet sungu, Papuan Lorikeet susum, Papuan King-parrot taowyeng, myzomelas
Ficus itoana: kwadat	kanek*, pygmy-parrot (tiger-parrot) susum, Papuan King-parrot
Geniostoma sp.: olpap	buya, Rufous-backed Honeyeater
Meliosma sp.: soan	gemat*, White-breasted Fruit-dove kanaarem*, Rufescent Imperial Pigeon mit mit, Yellow-billed Lorikeet moyem, berrypeckers sungu, Papuan Lorikeet (walap, cassowary)
Rhododendron spp.: nasing	buya, Rufous-backed Honeyeater nyingkok, melidectes taowyeng, myzomelas
Symplocus cochinchinensis: songit	gemat, White-breasted Fruit-dove samun, Huon Astrapias (male) sunumaak, Huon Astrapias (fem) tabel gaman, Spangled Honeyeater
Zanthoxylum conspersi-punctatum: kel	abangoi, Black-throated Honeyeater nyingkok, melidectes taowyeng, myzomelas
Rubiaceae: kisekin	tabel gaman*, Spangled Honeyeater
Rutaceae: dsimbe	moyem*, berrypeckers dakwat, Bronze Ground-dove dap dap, small lorikeets gurung menaam, white-eyes sengaam, Mottled Whistler tabel gaman, Spangled Honeyeater

-: dsua dsua	gemat*, White-breasted Fruit-dove kanaarem*, Rufescent Imperial Pigeon dakwat, Bronze Ground-dove dep gaman, Rufous-naped Whistler kanek, pygmy-parrot (tiger-parrot) samun, Huon Astrapias (male) sunumaak , Huon Astrapias (fem) tabel gaman, Spangled Honeyeater yoyo, migrating fruit-doves and pigeons, Papuan Mountain Pigeon
-: sipkwadat	dap dap, small lorikeets sungu, Papuan Lorikeet taowyeng, myzomelas
-: tekuk	moyem, berrypeckers sengam, Mottled Whistler tabel gaman, Spangled Honeyeater

Lower mid-montane forest: LMMF (1800-2300/2500 m ASL)

Alocasia macrorrhizos: koring	moyem, berrypeckers samun, Huon Astrapias (male) sunumaak , Huon Astrapias (fem) tabel gaman, Spangled Honeyeater
Cypholophus sp.: yavam	kwanamoyem*, spotted berrypecker (fem) moyem*, berrypeckers sirek sirek*, friarbird gurung menaam, white-eyes sengaam, Mottled Whistler tabel gaman, Spangled Honeyeater yagun kwadat, ?scrub wrens
Cyrtandra sp.: buyawanda	buya**, Rufous-backed Honeyeater
Cyrtandra sp.: ngerep-ngerep	buya, Rufous-backed Honeyeater
Dimorphanthera sp.: kwawa	tabel gaman**, Spangled Honeyeater buya*, Rufous-backed Honeyeater mit mit*, Yellow-billed Lorikeet nyingkok*, melidectes sungu*, Papuan Lorikeet taowyeng*, myzomelas abangoi, Black-throated Honeyeater

dap dap, small lorikeets
serang, Mountain Meliphaga

Ficus mollior: womerem

gemat, White-breasted Fruit-dove
kwanamoyem, Spotted Berrypecker (fem)
tabel gaman, Spangled Honeyeater

Freycinetia sp.: kamam

baol**, Black-billed Cuckoo-dove
moyem**, berrypeckers
kanek*, pygmy-parrot (tiger-parrot)
kobak*, small yellowish bird
pikwi*, Great Cuckoo-dove
samun*, Huon Astrapias (male)
sunumaak*, Huon Astrapias (fem)
tabel gaman, Spangled Honeyeater

Freycinetia sp.: tasung

baol, Black-billed Cuckoo-dove
kanek, pygmy-parrot (tiger-parrot)
moyem, berrypeckers
sirek sirek, friarbird

Galbulimima belgraveana: kombe

kanaarem*, Rufescent Imperial Pigeon
gemat, White-breasted Fruit-dove
yoyo, migrating fruit-doves and pigeons, Papuan Mountain Pigeon
(walap, cassowary)

Helicia sp.: yaok yaok

buya, Rufous-backed Honeyeater
taowyeng, myzomelas

Platea sp.: ivat

yoyo*, migrating fruit-doves and pigeons, Papuan Mountain Pigeon
gemat, White-breasted Fruit-dove
kanaarem, Rufescent Imperial Pigeon

Pittosporum sp.: sindaap

moyem*, berrypeckers
kobak, small yellowish birds
sengaam, Mottled Whistler
tabel gaman, Spangled Honeyeater
talabusit, Black-breasted Boatbill

-: kombe mangatnyi

gemat, White-breasted Fruit-dove
kanaarem, Rufescent Imperial Pigeon

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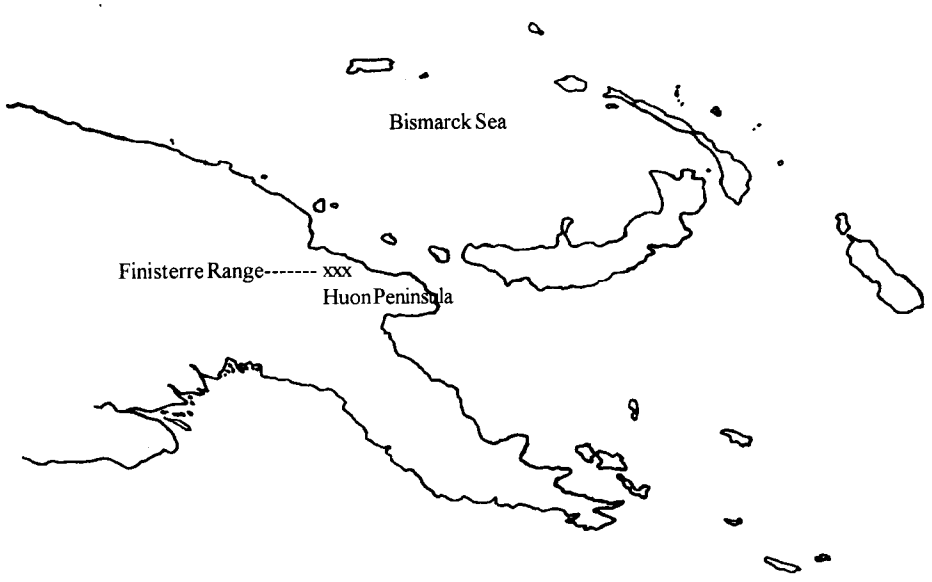
INDEX OF YOPNO, ENGLISH AND SCIENTIFIC NAMES

YOPNO	COMMON	SCIENTIFIC
pisisot	Ornate Melidectes	*Melidectes torquatus*
nyingkok	Belford's Melidectes	*Melidectes belfordi*
golda taakwan	Slaty-chinned Longbill	*Toxorhamphus poliopterus*
abangoi	Black-throated Honeyeater	*Lichenostomos subfrenatus*
taowyeng	Red-collared Myzomela	*Myzomela rosenbergii*
serang	Meliphaga	*Meliphaga sp.*
sungu	Papuan Lorikeet	*Charmosyna papou*
mitmit	Yellow-billed Lorikeet	*Neopsittacus musschenbroekii*
moyem	Fantailed Berrypecker	*Melanocharis versteri*
baol	Black-billed Cuckoo-dove	*Macropygia nigrirostris*
baol	Brown Cuckoo-dove	*Macropygia amboinensis*
butsip	Hooded Mannikin	*Lonchura spectabilis*
boomam	Torrent Flycatcher	*Monachella muelleriana*
tabel gaman	Spangled Honeyeater	*Melipotes ater*
dakwalova	Macgregors Bowerbird	*Amblyornis macgregoriae*
dakwalova	Wahnes' Parotia	*Parotia wahnesi*
talabusit	Black-breasted Boatbill	*Machaerirhynchus nigripectus*
dep gaman	Rufous-naped Whistler	*Pachycephala rufinucha*
dit	Papuan Flowerpecker	*Dicaeum pectorale*
tomo long	Forest Kingfisher	*Halycon macleayii*
dsakwo	Vulturine Parrot	*Psittrichas fulgidus*
dsirik pelit	Richard's Pipit	*Anthus novaeseelandiae*
gokek	Sulphur-crested Cockatoo	*Cacatua galerita*
kabekabet	Dwarf Honeyeater	*Oedistoma iliolophus*
kangare putok	Hornbill	*Rhyticeros plicatus*
kindsilim	Blue grey Robin	*Peneothello cyanus*
kwidnaak	Long-tailed Shrike	*Lanius schach*
lekdadat	Garnet Robin	*Eugerygone rubra*
nyiat nyiat	Wahnes' Parotia	*Parotia wahnesi*
nyiat nyiat	Superb Bird of Paradise	*Lophorina superba*
piyam	Blue-faced Parrot-finch	*Erythrura trichroa*
pikwi	Great Cuckoo-dove	*Reinwardtoeana reinwardtii*
bindsindsim	Grey Wagtail	*Motacilla cinerea*
saoreng	Palm Cockatoo	*Probosciger aterrimus*
sirek sirek	Friarbird	*Philemon sp.*
tengaak	Eclectus Parrot	*Eclectus roratus*
wikat	Lesser Melampitta	*Melampitta lugubris*
yaalsapsap	Spotted Jewel-babbler	*Ptilorrhoa leucostica*
yirum	Duck	*Anas spp.*
kalasip	Glossy Swiftlet	*Collocalia esculenta*
yagun kwadat	Scrub wrens	*Sericornis spp.*
muguguk	Variable Pitohui	*Pitohui kirhocephalus*
muguguk	Hooded Pitohui	*Pitohui dicrous*
gurung menaam	White-eyes	*Zosterops spp*
kungaak	Forbes Forest Rail	*Rallina forbesi*
gwaok madep	Frogmouths	*Podargus spp.*
gwaok mondsin	Owlet-nightjar	*Aegotheles spp.*
nyingwaol	Pied Chat	*Saxicola caprata*
pisisirip	Torrent Lark	*Grallina brujini*
pisisirip	White-shouldered Fairywren	*Malurus alboscapulatus*
singtul	Friendly Fantail	*Rhipidura albolimbata*
silek kwak	Dimorphic Fantail	*Rhipidura brachyrhyncha*

YOPNO	COMMON	SCIENTIFIC
singtul kwak	Rufous Fantail	*Rhipidura rufifrons*
dsingndet	Black Monarch	*Monarcha axillaris*
sengaam	Whistlers	*Pachycare spp.*
tangwaol	Torrent Flycatcher	*Monachella muelleriana*
tangwaol	Great Wood-swallow	*Artamus maximus*
num num	Rufous Woodcock	*Scolopax saturata*
ko	Buerger's Goshawk	*Accipiter buergersi*
singkwak	Grass Owl	*Tyto capensis*
baina	Goshawk	*Accipiter sp.*
karanoknok	Goshawk	*Accipiter sp.*
karanoknok	Little Eagle	*Hieraaetus morphnoides*
tovat	Gurney's Eagle	*Aquila gurneyi*
tovat	New Guinea Harpy-eagle	*Haliaeetus novaeguineae*
tovat	Long-tailed Buzzard	*Henicopernis longicauda*
kwanamoyem	Spotted Berrypecker fem	*Rhamphocharis crassirostris*
moyem	Mid-mountain Berrypecker	*Melanocharis longicauda*
dakwat	Bronze Ground-dove	*Gallicolumba beccarii*
balum	Sooty Owl	*Tyto tenebricosa*
balum balum	Large-tailed Nightjar	*Caprimulgus macrurus*
balum balum	Mountain Nightjar	*Eurostopodus archboldi*
leb leb	Stout-billed Cuckooshrike	*Coracina caeruleogrisea*
leb leb	Boyer's Cuckoo-shrike	*Coracina boyeri*
kobak	Canary Flycatcher	*Microeca papuana*
kobak	Green-backed Robin	*Pachycephalopsis hattamensis*
samun	Huon Astrapia male	*Astrapia rothschildi*
sunumaak	Huon Astrapia female	*Astrapia rothschildi*
kina	Emperor B.o.P., male	*Paradisaea guilielmi*
yagun	Emperor B.o.P. female	*Paradisaea guilielmi*
pamteng	Wattled Brush-turkey	*Aepypodius arfakianus*
pamteng	Common Scrubfowl	*Megapodius freycinet*
toa kwak	Browncollared Brush-turkey	*Talegalla jobiensis*
darek	Scrub wrens	*Sericornis spp.*
darek bam	Mountain Mouse-warbler	*Crateroscelis robusta*
dap dap	Pygmy Lorikeet	*Charmosyna wilhelminae*
pulu madep	Brown Quail	*Coturnix australis*
pulu mondsin	King Quail	*Coturnix chinensis*
dsikwamen	King Quail	*Coturnix chinensis*
buya	Rufous-backed Honeyeater	*Ptiloprora guisei*
olong	Huon Melidectes	*Melidectes foersteri*
silek pelin	Black Fantail	*Rhipidura atra*
silek gaman	Dimorphic Fantail	*Rhipidura brachyrhyncha*
kanek	Modest Tiger-parrot	*Psittacella modesta*
kanek	Red-breasted Pygmy-parrot	*Micropsitta bruijnii*
susum	Papuan King-parrot	*Alisterus chloropterus*
yoyo	Fruit-dove	*Ptilinopus spp.*
yoyo	Pigeon	*Ducula spp.*
yoyo	Papuan Mountain Pigeon	*Gymnophaps albertisii*
gemat	White-breasted Fruit-dove	*Ptilinopus rivoli*
kanaarem	Rufescent Imperial Pigeon	*Ducula chalconata*
kanaarem	Wompoo Fruit-dove	*Ptilinopus magnificus*
yarurum	Fan-tailed Cuckoo	*Cacomantis flabelliformis*
trerut	Fan-tailed Cuckoo	*Cacomantis flabelliformis*
trerut	Cuckoos and koels	*Cacomantis spp.*
tukngok	Helmeted Friarbird	*Philemon buceroides*
wung kungaak	Common Sandpiper	*Tringa hypoleucos*

YOPNO	COMMON	SCIENTIFIC
gworek	Golden-headed Cisticola	*Cisticola exilis*
gworek	Tawny Grassbird	*Megalurus timoriensis*
wusa menaam	White-faced Robin	*Tregellasia leucops*
wusa menaam	Canary Flycatcher	*Microeca papuana*
gwangget	White-faced Robin	*Tregellasia leucops*
gwangget	Mountain Peltops	*Peltops montanus*
toa pamteng	Common Scrubfowl	*Megapodius freycinet*
samun kwawat	Huon Astrapia female	*Astrapia rothschildi*
nyingkok	Cinnamon-browed Melidectes	*Melidectes ochromelas*
nyingkok	Yellow-browed Melidectes	*Melidectes rufocrissalis*
moyem	Streaked Berrypecker	*Melanocharis striativentris*
moyem	Spotted Berrypecker male	*Rhamphocharis crassirostris*
ko	Meyer's Goshawk	*Accipiter meyerianus*
kanaarem madep	New Guinea Bronzewing	*Henicophaps albifrons*
kanaarem mondsin	Emerald Ground-dove	*Chalcophaps indica*
susum	Black-capped Lory	*Lorius lory*
tengaak	Black-capped Lory	*Lorius lory*
dap dap	Goldie's Lorikeet	*Trichoglossus goldiei*
dap dap	Plum-faced Lorikeet	*Oreopsittacus arfaki*
yarurum	Cuckoos and koels	*Cacomantis spp.*
gengaarat	Rufous Owl	*Ninox rufa*
gwaok mondsin	Mountain Owlet-nightjar	*Aegotheles albertisi*
kalasip mondsin	Glossy Swiftlet	*Collocalia esculenta*
kalasip madep	Tree-swift	*Hemiprocne mystacea*
kalasip madep	Pacific Swallow	*Hirundo tahitica*
tomo long	Sacred Kingfisher	*Halycon sancta*
yaalsapsap	Jewel-babblers	*Ptilorrhoa spp.*
darek	Mouse-warblers	*Crateroscelis spp.*
nawa menaam	Tawny Grassbird	*Megalurus timorensis*
nawa menaam	Golden-headed Cisticola	*Cisticola exilis*
pelesigut	Island Leaf-warbler	*Phylloscopus trivirgatus*
wusa menaam	Mountain Peltops	*Peltops montanus*
gwangget	Canary Flycatcher	*Microeca papuana*
sengaam	Mottled Whistler	*Rhagolagus leucostigma*
taowyeng gaman	Red Myzomela	*Myzomela cruentata*
taowyeng	Elfin Honeyeater	*Myzomela adolphinae*
buya	Honeyeaters	*Ptiloprora spp.*

Papua New Guinea



Map to show the location of the Huon Peninsula and Finisterre Range as featured in *Birds of Nokopo.*

INSTRUCTIONS TO AUTHORS

MURUK welcomes any contributions which enlarge the body of knowledge of the birds of the New Guinea region. We welcome scientific papers, travelogues, regional lists, and casual observations. The recent observations section is compiled from submitted observations. Please send all contributions to:

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