

NEST RECORD CARD SCHEME – Reference List of Codes

This list of codes is for easy reference – they are explained in detail in the booklet ‘Collecting information on nesting birds’ available from BirdLife Botswana.

HABITAT CODES	
<p><u>Level 1</u> FOREST (indigenous forest with characteristic forest understory)</p> <p>RIVERINE FOREST * (tall trees in a dense, narrow strip along the banks of a waterway or faultline)</p> <p>DENSE WOODLAND * (trees, relatively dense with a more-or-less continuous canopy, often with thickets)</p> <p>OPEN WOODLAND * (trees, far apart with no continuous canopy and stretches of open ground between trees)</p> <p>GRASSLAND (natural grasses over large, treeless areas)</p> <p>SCRUBLAND * (dominant woody vegetation less than 2m high, including much of the Kalahari biome)</p> <p>DESERT</p> <p>MONTANE (including koppies, hills, mountains and escarpments)</p> <p>WETLAND (must have a definable boundary i.e. not a seep or temporarily wet area with no recognizable wetland habitat)</p> <p>PASTURES (i.e. planted/sown grass, or secondary growth after bush clearance, NOT natural grassland)</p> <p>PLANTATIONS AND ORCHARDS (i.e. planted trees)</p> <p>PLOUGHED FIELDS (ground has been ploughed, but not necessarily recently)</p> <p>PARKS AND GARDENS (artificially planted areas usually associated with human habitation)</p>	<p><u>Level 2</u> - Forest interior, forest edge, bracken/briar, canopy height <5m (x), 5-10m (y), >10m (z), other (specify).</p> <p>- Forest interior, forest edge, canopy height <5m (x), 5-10m (y), >10m (z), largely alien trees, other (specify).</p> <p>- Acaria-dominated, Mophane-dominated, other broadleaved, largely alien trees, interior, edge, thicket, rocky, sandy, grassy, other (specify).</p> <p>- Acaria-dominated, Mophane-dominated, other broadleaved, largely alien trees, rocky, sandy, grassy, other (specify).</p> <p>- Grass height <5cm (v), 5-10cm (w), 10-30cm (x), 30-100cm (y), >100cm (z), burnt, marshy, other (specify).</p> <p>- Kalahari, largely alien trees, other (specify).</p> <p>- Gravel, sand, rock, grass, scrub, other (specify).</p> <p>- hill, koppie, mountain, low cliff (<10m), high cliff (>10m), plateau, steep slope, gentle slope, north-facing, south-facing, east-facing, west-facing, rocky, even, wooded ravine, marshy ground, other (specify).</p> <p>- Small dam (<1ha) (a), big dam (<1km²) (b), very large dam (>1km²) (c), estuary, lake, vlei, marsh, river, stream, sewage works, natural saltpan, salt works, other (specify).</p> <p>- Cultivated grass, wild grass, grass < 5cm (v), grass 5–10cm (w), grass 10–30cm (x), grass 30-100cm (y), grass >100cm (z), burnt, marshy, cattle, sheep, goats, other (specify).</p> <p>- pine, eucalypt, wattle, vineyard, fruit trees, interior, edge, saplings, tall trees, other (specify).</p> <p>- interior, edge, bare ground, freshly tilled, leafty crops, short grain, tall grain, grain stubble, fallow less than 2 years, fallow more than 2 years, other (specify).</p> <p>- industrial, urban, suburban, rural, other (specify)</p>

MISCELLANEOUS

* Note that these categories can consist largely or entirely of invasive alien trees or bushes, in which case this should be specified at Level 2

- give a description of the habitat

HUMAN IMPACT CODES

As for the habitat codes, focus on the general area (50m² – 1km²) which forms the context of the nest and includes the territory of the breeding pair. Choose a two-letter code.

LITTLE: natural vegetation which is in a relatively undisturbed condition.

LP: Pristine wilderness area, negligible human presence

LR: natural and unspoilt but with regular human presence *e.g.* along a hiking trail

LT: natural but plenty of human activity, tourism, recreation *e.g.* a lake with fishing, boating *etc.*

LC: natural but at times crowded with visitors *i.e.* intensely utilized *e.g.* a popular beach

MODERATE: mainly natural vegetation but degraded or partially destroyed

MG: degraded by grazing

MA: invaded by alien plants

MR: indigenous vegetation removed/cut but regenerating

MB: burnt but regenerating

MH: human habitation (*i.e.* houses or huts or shacks) with moderate impact

HEAVY: natural vegetation present but it constitutes a minor proportion of the area and the impact of humans is high.

HG: natural vegetation heavily overgrazed

HA: heavy alien plant infestation

HH: human habitation (*i.e.* houses or huts or shacks) with heavy impact

HF: farming activity with heavy impact

HM: mixed residential and agricultural impact

TOTAL: natural vegetation totally removed and replaced by

TP: plant crops, tree plantations, orchards *etc.*

TB: buildings, roads *etc.* *i.e.* 'concrete jungle'

TS: dense informal settlements

TG: parks, gardens, typical middle- to upper-class suburbs

TW: dams, reservoirs, sewage works, water purification plants *etc.*

NEST SITE AND POSITION

Choose one of the codes below to describe where the nest is positioned. Give a full description of other nest details in the space provided on the back of the form.

N: natural site, specify

A: alien/exotic tree or bush, specify if possible

M: man-made building or structure, specify

Q: man-made quarry or cutting or earthworks, specify

B: nestbox, specify type

O: other, specify

Your notes should include details to clarify your choice of code (above), and to provide additional information.

STATUS CODES

Enter one status code on each line, in the 'codes' column.

- **Nest-building codes**

The following codes describe the condition of the nest itself and do not imply anything about its contents. If there are eggs and/or chicks in the nest, these codes are redundant, EXCEPT if the nest is incomplete. In such cases, have a line for the nest in addition to lines for eggs and/or chicks.

NU: nest under construction, stage unknown

N0: nest not yet built

N1: nest ¼ built

N2: nest ½ built

N3: nest ¾ built

NC: nest complete, unlined

NL: nest complete, lined

- **Egg-laying and incubation codes**

These codes apply to the period when there are eggs in the nest. More than one line may be necessary to describe the clutch if it can be seen that the eggs are at different stages of incubation. Note that newly laid white eggs often have a pinkish hue which lasts for approximately one day.

EU: stage unknown

E0: clutch incomplete

E1: eggs fresh or clean and in first 1/3 of incubation

E2: eggs in middle 1/3 of incubation

E3: eggs in last 1/3 of incubation

E4: eggs pipped/hatching

EA: eggs addled

- **Chick codes**

Note that chicks may be in a nest or outside of a nest. The following codes are designed to meet the needs of both situations. More than one line may be necessary to describe the brood. If eggs are also present, use separate lines to describe them as well.

Precocial chicks

PU: stage unknown

P0: just hatched

P1: ¼ adult height/length

P2: ½ adult height/length

P3: ¾ adult height/length

P4: >3/4 adult height/length

PD: chick dead in or near nest

Altricial chicks

AU: chicks in nest, age unknown

A0: naked, downy, blind/eyes closed

A1: primary feathers in pin, no feather coloration visible

A2: primary feathers in brush, feather structure and colour visible

A3: whole body feathered

A4: chicks fledged successfully

AD: chick dead in nest

- **Evidence of success codes**

The evidence must be given as one or more **dated observations**, on separate lines. See next page.

The following codes relate to live young which have left the nest, NOT including *downy* precocial chicks (In other words, it is necessary to make a distinction between downy chicks and properly feathered fledglings). Note that a nest is 'successful' even if only one fledgling (*i.e.* a fully feathered young bird, out of the nest) is reared, and the other chicks in the brood died or disappeared earlier in the breeding attempt.

NE: nest empty, undisturbed and lining well trodden, containing feather scales and/or droppings

SF: hatched shell fragments in empty nest (gamebirds and ducks)

EX: chicks exploded from nest

LB: young left nest naturally before fledging (*e.g.* herons)

SL: fledged young seen leaving nest

NN: fledged young near nest

AF: adult feeding nestlings near nest

MR: marked/ringed young retrapped/resighted

- Evidence of failure codes

Note that a nest is 'successful' even if only one fledgling (*i.e.* a fully feathered young bird, out of the nest) is reared, and the other chicks in the brood died or disappeared earlier in the breeding attempt.

EN: eggs not hatched

EB: eggs broken

CK: chicks killed, cause unknown

CP: chicks killed or thrown out by brood parasite

CD: chicks deserted/starved

NF: nest flooded

NB: nest burnt

NW: nest damaged or displaced by wind

PN: predation, natural

PD: predation by domestic animals (*e.g.* a cat)

DD: deliberate human disturbance

DV: destroyed by vehicle

DH: unintentional damage by humans

DU: unintentional disturbance by humans

AI: additional information on cause of failure noted in comments

- Outcome codes

These codes should be chosen after the final visit to the nest to describe whether the nest succeeded or failed to rear a single chick, if this is known. The outcome must be one of success (S), failure (F) or unknown (U) in the block provided in the top half of the card. Note that a nest is 'successful' even if only one young is reared and other chicks in the brood die or disappear earlier in the breeding attempt.