

W. W. Thomas's bird records from Laos, principally Vientiane, 1966–1968 and 1981–1983

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The only primary information about wild birds in Laos between 1949 and 1988 are the records gathered during recreational birdwatching by William W. Thomas, Jr. Although some were incorporated into other people's publications, most information was hitherto unpublished. During these 40 years, many bird species declined steeply in Laos, and so all of WWT's records are presented here. They come from 1966–1968 and 1981–1983, mostly from Vientiane town and immediate environs. They form the earliest documentation of Vientiane's avifauna. Taken together, and in comparison with recent records, they corroborate the declines inferred to have taken place in and around Vientiane for many of the larger birds of wetlands, rivers and other non-forest habitats, and give some indication of timing. They strengthen the evidence that current numbers of most ardeids and sturnids in Laos are unnaturally low. Loss of forest species from Vientiane town reflects local habitat change and does not imply the species are at risk throughout the country. By contrast, factors driving the declines of non-forest birds in and around Vientiane – intensive human use of their habitats leading to habitat degradation and human disturbance, coupled with very heavy opportunistic, and sometimes directed, persecution – are at work throughout the country in such habitats. Many species of these habitats are at risk of national extinction, or at least effective ecological extinction over much of Laos.

The records include the first for Laos of several species, all of which have subsequently been found regularly. They provide the only evidence for Black Kite of race *Milvus migrans govinda* in Laos, a taxon now almost extinct in South-East Asia. The only records from North Laos are given for a suite of species strongly associated with deciduous dipterocarp forest, but there has been no other recent work in this habitat in the North.

INTRODUCTION

Until recently, the avifauna of Laos remained poorly known, reflecting limited historical collecting expeditions, and the small number of residents (all foreign) who documented birds. Reflecting several decades of civil unrest followed by limited access to foreigners, and a continued lack of Lao birdwatchers, no published material is known between David-Beaulieu (1949–1950) and the arrival of R. E. Salter (of IUCN: the World Conservation Union) under the Lao-Swedish Forestry Cooperation Programme (LSFCP) in 1988 (Salter 1993). The 1990s witnessed extensive bird survey across Laos, through the LSFCP and subsequently by the Lao PDR government Department of Forestry in collaboration with international conservation NGOs (Duckworth *et al.* 1999). During the four decades without records, major changes took place in Lao avifauna. Most notable was the precipitous decline across most of Laos of larger birds of open habitats, particularly Green Peafowl, large waterbirds, vultures, fish eagles, kites and Large-billed Crow. Open-country birds even as small as mynas were affected. Effects were particularly severe on river channel nesters, notably terns (Thewlis *et al.* 1998, Duckworth *et al.* 1999, 2002). In order for modern conservation initiatives to halt or reverse these declines, understanding of their causes, timings and other characteristics needs to be enhanced.

The only information on Lao birds from the period 1950–1987 appears to be that of William W. Thomas, Jr (hereafter WWT), who worked at the Embassy of the United States of America for two spells: August 1962–

August 1964 and November 1981–November 1983. These observations have remained unpublished until now, although some were provided by WWT to other authors (e.g. King *et al.* 1975). This paper synthesises all WWT's Laos bird notes, paying particular attention to records of key species of special conservation significance (e.g. threatened, rare, or localised in distribution), and to records of distributional significance. Moreover, this is the first body of bird records from Vientiane; earlier studies of local Lao avifaunas all covered provincial areas (Engelbach 1932, David-Beaulieu 1944, 1949–1950). Some observations were made in Vientiane from 1992 to 2000 (Thewlis *et al.* 1996, 1998, Evans and Timmins 1998, Duckworth *et al.* 1998a, 1999, 2002, Poulsen in prep.; P. Davidson, T. D. Evans, W. G. Robichaud, R. J. Timmins, RJT and JWD own data), but these were sporadic and not sufficient to characterise the capital's avifauna.

Systematic order and nomenclature of birds follows Inskipp *et al.* (1996). Except for species headings, scientific names are given in the text only for species not in the Appendix. Global threat categorisations are taken from BirdLife International (2001). Lao risk categorisations (At Risk in Laos, Potentially At Risk in Laos, Little Known in Laos) are taken from Duckworth *et al.* (1999), mindful of additional discussion of open-country birds in Duckworth *et al.* (2002). The country is split into three recording regions, North, Centre and South, following King *et al.* (1975) as clarified by Duckworth *et al.* (1999). Place names are based on the 1986 series of 1:100,000 maps produced by the RDP *Lao Service Geographique d'Etat* following the minor

nomenclature modifications of Thewlis *et al.* (1998). Protected area names follow Thewlis *et al.* (1998). Most sites, including all those not in Thewlis *et al.* (1998), are shown in Fig. 1.

MAIN SURVEY AREA: VIENTIANE IN THE 1960s–1980s

Throughout WWT’s time, the opportunity to visit wilderness in Laos was limited, in the 1960s by war-related dangers, and in the 1980s by tight government restrictions on movements of westerners. WWT lived in Vientiane, near the Anousavaly monument in the 1960s, and in Ban Wat Nak in the 1980s. Many observations in the 1980s came from his garden and vicinity. Observations could be made regularly only within a distance of 6–8 miles of the town centre, because of government limits for foreigners’ movements. Some ‘Vientiane’ observations may have been from a little further out, because small roads were rarely marked to indicate the limits. It was not necessary to go far from town to be in the countryside. Even in the 1980s, the Wat Nak house felt ‘out from town’, and even in town,

there were few cars and little noise. Observations were made in a variety of agricultural and village areas, including patches of secondary woodland, and wetlands. The most notable of the latter was That Louang marsh (then on the edge of Vientiane), which in the 1960s was fairly large and unpolluted. In the early 1980s, it was smaller and somewhat polluted. By the late 1990s, it had all but disappeared. In the 1960s, observations were made on several boat trips along on the Mekong river, not ranging far from Vientiane. These were mostly half-day social events with birding fitted around the schedule. The Mekong channel around Don Chuan (a large sandbar off central Vientiane; referred to as Garden Island in Duckworth *et al.* 1998a) was also visited at this time. Trips were also made to various sites along the Mekong river: Xieng Khuang (now the site of the ‘Buddha Park’), Ban Thanaleng (now the site of the Lao-Thai Mekong bridge) and Ban Thadua. These were recorded in WWT’s notes separately from ‘Vientiane’, suggesting that other areas equivalently far out would also have been distinguished from Vientiane. Records designated as from ‘Vientiane’ do not include areas of extensive or thick forest, and from memory, no land trip exceeded 15 miles from Vientiane centre.



Figure 1: Laos, showing areas visited by W. W. Thomas, and other sites mentioned in the text.

METHODS

Data sources

In autumn 1999, RJT visited WWT at his home in America to discuss possibilities for writing up his Lao bird records. Because of his declining health, we undertook to prepare the information for publication. Over the next few months, copies and/or originals of all WWT's materials related to Lao birds that could be traced by WWT and family were sent out to us in Asia. Copies of all material have been deposited with the Wildlife Conservation Society Cambodia Programme, as well as being retained in the personal collections of the authors. There are several basic sources of bird records. WWT's notebook information from February 1963–August 1964 consists of a combined species list for Vientiane province (including, by implication, Vientiane municipality) for August 1962–August 1964, a list of species in 'Vientiane' on 12 April 1964, and notes on a few trips outside the capital (Table 1, Fig. 1). For 23 August 1962–February 1963, bird records are entered with site, date, and, rarely, counts. Species are mostly noted only once, presumably at first sighting. Records from the 1980s (2 November 1981–17 November 1983) are again strongly centred on Vientiane, and are far more detailed than those from the 1960s. They consist largely of period/site-lists of birds, with counts for almost all species on nearly every list. Other information (e.g. breeding indication) is given sporadically. Many lists cover a week, the longest covers 10 days (only four times); many are for single days. Only one gap exceeds a fortnight (for four weeks): WWT persisted observing through the wet seasons (June–October). Altogether, this detail allows good determination of most species' status in the 1980s period. The limited information as to where in Vientiane observations were made limits comparability within the data themselves (e.g. changes in birds recorded could reflect changes in WWT's birding sites as much as changes in bird populations), and with subsequent information. Only few visits were made outside central Vientiane (as defined by the 6–8 mile limit) in the 1980s (Table 1, Fig. 1).

As well as (photocopies of) the original notebooks, there is a set of index cards (one per species) used by WWT to begin compilation of a 'Birds of Vientiane province'; an annotated copy of Engelbach (1932); and a two-page letter from 1963 detailing records of distributional interest. There are some inconsistencies between the various sources, some of which are obvious slips in transcription. Others, however, indicate that the 1960s observations were initially recorded in much more depth. The location of these notes is not now clear. Discrepancies significant in interpreting the records are mentioned below.

There are few in-hand records (mostly from markets): most entries are field sight records. Tremendous advances in field identification have been made in the last couple of decades. The first field guide to birds of South-East Asia (King *et al.* 1975) was a remarkable starting point and from the late 1970s increasing numbers of birders visited Thailand, pushing ever further forward the ability to identify South-East Asian birds conclusively in the field. WWT was in Laos

Table 1. W.W. Thomas's birdwatching trips outside Vientiane.

1960s
19 September 1962: Plain of Jars and Ban Phonsavan
8–9 December 1962: Pakxe, Attapu ¹ , Houay Khong ² , Champasak ¹ to Wat Phu, Paksong, Salavan ¹
23 December 1962: Thanaleng
26–28 December 1962. Louangphabang ¹ and Pak Ou.
23 February 1963: Ban Thadua (full list not available)
February 1964: Ban Houayxai (only three species noted)
1980s
22 December 1981: Ban Thanaleng
2 or 3 January 1982: Xieng Khuang
12 February 1982: Ban Thadua
14–15 September 1982: Savannakhet ¹ , but no birds seen, Vangveun ³ , Pakxe
19–23 November 1982: Ban Phonsavan.
29 July–3 August 1983: Louangphabang ¹
31 July 1983: Pak Ou
10 and 28 October 1983: Phou Hong, Nam Ngum Dam

¹ There are both towns and provinces of these names; all records are believed to come from the towns.

² Believed to be on the northern part of the Bolaven Plateau, approximately 15°07'N 106°32' E.

³ Believed, from presumed Universal Transverse Mercator figures in WWT's notebook, to be in the headwaters of the Xe La Nong, which flows north into the Xe Banghiang; approximately 16°08'N 106°43' E.

just before this: particularly, in the 1960s he had nothing resembling a modern field guide. Identifications therefore needed a high degree of caution. WWT's notebook contains many '?' signs, and in difficult groups (e.g. warblers) relatively few species identifications were made. WWT was in Cambodia directly before his first spell in Laos, and drafted a monograph on the birds of Cambodia. Examination of his notebooks and various drafts of this MS show a diligent approach to bird record-keeping, with the initial identifications refined according to subsequent research (Thomas and Poole 2003, this issue). It is necessary to discuss this here, because WWT never subjected his Lao bird records to the same critical re-analysis. Therefore, it is noted below where it seems likely that WWT would have revised identification (for which in many cases he had placed '?' characters in his notebook). All species listed in any of the above sources from Laos are referred to somewhere in this paper, to forestall possible future confusion.

The written sources now available include only occasional information on where within Vientiane specific observations were made. WWT, Sara Thomas (his wife) and Wayt Thomas (his son) pooled memories of their time in Laos to provide much of the contextual information used here in, e.g., the section on 'Vientiane in the 1960s–1980s'. Any information about birds added from memory is always specifically indicated as such.

Analysis

All species listed by WWT are presented in the Appendix. Identifications were reviewed against species expected to be present, based upon accumulated information on altitude, habitat and geographical range of each species in Laos and South-East Asia (e.g. Duckworth *et al.* 1999, Robson 2000, Inskipp and Mlikovský in prep.). Species well outside their known altitude and habitat range were all given critical consideration. Review is not easy, because the habitat changed significantly in and around Vientiane during 1960–1999 (see below). Species identifications are presented as given by WWT, modified only for changes in taxonomy and nomenclature; those assessed by us now to be best considered provisional are in [square brackets]. The generally accurate identification reflects WWT's wide experience in Asia, frequent field time, and extensive correspondence with other ornithologists in the region. Nonetheless a few species entered in the notebook, mostly marked with '?' signs, were dropped from consideration (see footnote to the Appendix).

Species records were extracted from the period/site lists to give overall lists for each site for the 1960s and the 1980s separately. For 1980s Vientiane, the total number of period/site-lists recording the species was calculated. Records of shot/recently trapped birds were included in these figures, because they probably were fresh captures at or near site of observation. Records of caged or market birds could have come from anywhere, and were excluded from the totals, although some are considered in the text below. The total number of period/site-lists, over 150, means little because some consist only of noteworthy birds. Hence, even common and conspicuous residents (e.g. Eurasian Tree Sparrow and Common Tailorbird) are not on every list. No such analysis was possible for the 1960s. Although some species were noted multiple times, these are clearly ones that WWT then felt to be of specific interest. Most species are mentioned only once, so it is not now possible to tell whether a given species was not mentioned again because it was so rare that it was never re-found, or so common that it was not felt noteworthy. For example, notes of the first week in Vientiane include Eurasian Tree Sparrow, Common Tailorbird, Asian Palm Swift and two species of vulture. None is mentioned again for 1960s Vientiane. The first three remain abundant in Vientiane and WWT presumably saw them frequently; but the vultures are now extinct throughout North and Central Laos. Did this single 1960s noting represent the sole sighting, or were vultures also then so common that they were not subsequently noted? For a selection of high-profile species, WWT provided further details from memory, over email in 2002, of status in Vientiane in the early 1960s.

Individual species accounts are given only for species in one or both of the following groups: (1) Key species of elevated conservation concern, as assessed on their current status in Laos (Duckworth *et al.* 1999); (2) Species where WWT's records are of distributional significance, representing the first record for Laos, the only record for North, Central or South Laos, or the first confirmation of breeding in Laos. Other species where the Vientiane status in the 1960s–1980s seems to differ from that in the 1990s are discussed after the selected species accounts.

SELECTED SPECIES ACCOUNTS

JAPANESE QUAIL *Coturnix japonica* Little Known in Laos
Vientiane: Two on 15 November 1981 and one during 25–27 November 1982. These records are at the November peak of occurrence identified for North Laos by David-Beaulieu (1944). The species has probably declined in Laos (Duckworth *et al.* 2002), but its primary habitats – agricultural stubbles and short grassy areas – remain poorly covered. These records, as those in the 1990s, were found without use of a dog.

BLUE-BREASTED QUAIL *Coturnix chinensis* Little Known in Laos

Vientiane: Two on 2 and 9 May 1982; on the latter date, in paddy stubble. The only other Vientiane records were also in May, in 1999 (Duckworth *et al.* 2002).

GREEN PEAFOWL *Pavo muticus* At Risk in Laos

Vientiane: Two young captives on 20 January 1963.
Houay Khong: Present on 8 December 1962. Green Peafowl populations have collapsed across Laos and the rest of the species's range (Evans and Timmins 1996, 1997, McGowan *et al.* 1998). WWT rarely ventured into habitat suitable for the species.

[COTTON PYGMY-GOOSE *Nettapus coromandelianus* At Risk in Laos]

Vientiane: Four, listed only provisionally, during 19–25 September 1983. There are no other records from Vientiane, although the Vientiane plain wetlands (see Claridge 1996) look like suitable habitat, and the species occurred elsewhere in North Laos (e.g. David-Beaulieu 1944). Recent records come only from the southern third of the country (Duckworth *et al.* 1999).

BLACK-HEADED WOODPECKER *Picus erythropygius*

Vientiane: Recorded during 1962–1964. This is the only record for North Laos; the next northernmost Lao records are from Savannakhet province (David-Beaulieu 1949–1950, Thewlis *et al.* 1998). The lack of subsequent records in Vientiane may simply reflect lack of observer activity, especially in deciduous dipterocarp forest (with which the species is strongly associated in Laos: Thewlis *et al.* 1998) on the Vientiane plain.

WREATHED HORNBILL *Aceros undulatus* At Risk in Laos

Vientiane: A captive on 22 July 1982, said to be 27 days old, and from the hills of Vientiane province. Hornbills are the only birds of closed evergreen forest to have demonstrably declined within remaining habitat in Laos (Thewlis *et al.* 1998). WWT had limited access to suitable habitat.

GREAT HORNBILL *Buceros bicornis* At Risk in Laos

Houay Khong: Present on 8 December 1962. See Wreathed Hornbill.

COMMON HOOPOE *Upupa epops*

Salavan: Present on 9 December 1962. Resident populations of hoopoes may have declined in Laos (reviewed in Duckworth *et al.* 2002). WWT's Vientiane lists include many species sharing the open wooded habitats of hoopoes, yet he did not record the species. This suggests that this conspicuous bird was absent or,

at best, infrequent in the areas he visited, even in the 1960s.

[CRESTED KINGFISHER *Megaceryle lugubris*]

Pak Ou: One, provisionally identified, on river rocks, 31 July 1983. Crested Kingfisher maintains healthy populations in the Mekong tributaries of North and Central Laos (Thewlis *et al.* 1998, Davidson in prep.). There are historical records from the Mekong river itself (Delacour and Greenway 1940), but no recent ones. The significance of this is not clear; observations have not been intensive enough on the Mekong river in this species's range.

PIED KINGFISHER *Ceryle rudis* At Risk in Laos

Vientiane: Present during 1962–1964 (specifically recorded on 30 January 1963), and remembered as 'uncommon'. This observation adds to those of Engelbach (1932), Delacour and Greenway (1940) and David-Beaulieu (1949–1950) in documenting that Pied Kingfisher formerly occurred the length of the Mekong river in Laos. Now it is almost restricted to the far south (Thewlis *et al.* 1998), with only two records from the far north (Duckworth *et al.* 2002). There are no recent records from Vientiane, despite the Mekong river being the focus of observation.

ASIAN KOEL *Eudynamis scolopacea*

Vientiane: Singles heard on 2 May, 30 May and 29 August 1982. There is no resident population of koels now in Vientiane, and only one recent record (listed in Thewlis *et al.* 1996). The species is a brood-parasite of crows, Black-collared Starlings and other sturnids (Johnsgard 1997, Wells 1999, Davies 2000, Carey *et al.* 2001); all of these are now locally extinct or greatly declined in much of North Laos. These records might reflect dispersal across the Mekong river: Large-billed Crows persist in adjacent north-east Thailand (Lekagul and Round 1991). Alternatively, the species is kept frequently in cages in Vientiane (R. Thewlis *in litt.* 2002; RJT unpubl.) and escapes would presumably survive some time. This may be the explanation for the Vientiane records in the 1980s and 1990s.

ALEXANDRINE PARAKEET *Psittacula eupatria* At Risk in Laos

Vientiane: Singles caged (noted as '*P. krameri*') on 12 and 28 February 1982, and during 28 March–4 April 1983; one captive on 12 September 1982; two caged young during 7–13 March 1983. Alexandrine Parakeet formerly inhabited the Vientiane area (in adjacent Thailand: Robinson and Kloss 1931), but has declined significantly in Laos (Thewlis *et al.* 1998). There is no way of telling where these birds came from. Nest-robbing may be a significant cause of the species's decline (Thewlis *et al.* 1998).

BLOSSOM-HEADED PARAKEET *Psittacula roseata* Potentially At Risk in Laos

Vientiane: Two (captive) on 5 June 1982; an immature (noted as 'escape?') killed by a dog on 24 October 1982. Small numbers persist at Sangthong (Vientiane municipality; R. Jelinek in Duckworth *et al.* 1999), but the October record may indeed have been an escaped cagebird. WWT rarely visited the parts of Laos with the

best remaining populations: the lowest altitude, open, deciduous forests of South Laos (Duckworth *et al.* 1999). WWT also recorded both Grey-headed Parakeet and Red-breasted Parakeet in cages, the latter frequently.

BARN OWL *Tyto alba* Little Known in Laos

Vientiane: Present on 6 September 1962 and described as a fairly common resident, audible in the city during the rainy season (August–October); one on 19 May 1983 at a Vientiane market at dusk. Compared with other large cities in the region, e.g. Bangkok, Phnom Penh and Hanoi, the absence of Barn Owl records in Vientiane today is notable (Duckworth *et al.* 2002). These records, the first for Vientiane, indicate that the current absence reflects a recent change, presumably through persecution, rather than some underlying ecological factor.

RED COLLARED DOVE *Streptopelia tranquebarica*

Vientiane: Present during 1962–1964 (specifically recorded on 9 September 1962), and remembered as 'not common'. Red Collared Dove is a resident of open deciduous forests in South Laos (persisting in good numbers: Thewlis *et al.* 1996, Duckworth *et al.* 1998a, Round 1998, Evans *et al.* 2000), and a winter visitor throughout the country. There are very few recent records of wintering birds, and these are of only small numbers (Brooks and Sørensen 2001, Duckworth *et al.* 2002). This, the only record ever from Vientiane, comes in the August–September peak identified by David-Beaulieu (1944) in North Laos.

SPOTTED DOVE *Streptopelia chinensis*

Vientiane: One on 20 or 21 February 1983; also many records of caged birds. This is the only record of Spotted Dove from urban Vientiane, and could in fact have been an escaped cagebird. The species was found to be scarce in Houay Nhang Nature Reserve (Vientiane municipality) by Thewlis *et al.* (1996), and this was presumed to represent local over-harvesting (for food and caging), especially as it was common in nearby Sangthong (Duckworth 1996). There is good evidence for declines in some other parts of Laos, e.g. Xiangkhouang (reviewed in Duckworth *et al.* 2002), and Cunningham (2001) recorded villagers in South Laos setting decoy traps specifically for Spotted Dove.

GREEN IMPERIAL PIGEON *Ducula aenea* At Risk in Laos

Vientiane: Recorded during 1962–1964; remembered as at least one field record, as well as market birds; two (reportedly trapped at Pakxan) released in Vientiane on 17 March 1983. As a large-bodied, tasty bird of open and accessible habitats, which, moreover, visits fruiting trees and so can be shot by waiting hunters, it is not surprising that this species has greatly contracted its Lao range (reviewed in Thewlis *et al.* 1998). It seems it disappeared from Vientiane between WWT's two spells of observation.

WATERCOCK *Gallix cinerea* At Risk in Laos

Vientiane: Singles on 16 January 1982, 15 May, 5 and 20 June, 17 July (listed as provisional), 5 and 10 September 1982, and during 11–18 September 1983; three on 8 and four on 22 August 1982; two on 6 September 1982; a captured female during 17–23

October 1983. These records suggest that Watercock was a wet-season visitor to Vientiane, presumably breeding. The January sighting recalls one from South Laos in winter 1992–1993. Most other Lao records are from the wet season (Duckworth *et al.* 1999, Poulsen in prep.). The absence of subsequent records from Vientiane town is consistent with the species being At Risk in Laos (Duckworth *et al.* 1999). However, there have been few recent observations during the wet season in Vientiane wetlands, and there is a recent record from Nong Pen wetland near Ban Thadua (two males on 5 March 2000; T. D. Evans *in litt.* 2003). Reports of declines and scarcity also come from Hong Kong (Carey *et al.* 2001) and Korea (Lee *et al.* 2000).

EURASIAN CURLEW *Numenius arquata*

Vientiane: Two low over the Mekong river at Ban Mai (10 km west of Vientiane) on 29 December 1962. This remains the only record of the species from Laos, although Cunningham (2001) observed the genus (number of birds not noted) for sale in Khinak market, Champasak province, on 30 September 1997. The only other species in the genus yet recorded in Laos is Whimbrel *N. phaeopus*. The first Lao record was at Pakxe on 1 September 2001 (Poulsen in prep.). The only record for North Laos is of one flying down the Mekong river at Ban Thadua on 13 August 2002 (JWD unpubl.).

MARSH SANDPIPER *Tringa stagnatilis*

Pakxe: One on 14 or 15 September 1982. This appears to be the only specific record from South Laos, although it was implied to occur there by Delacour and Jabouille (1940).

GREATER PAINTED-SNIPE *Rostratula benghalensis*

Vientiane: Present during 1962–1964 (specifically recorded on 8 September 1962), and remembered as 'uncommon'; one or two birds on 20 December 1981, 14 February 1982, 4 and 10 April 1982; trapped birds on 15 February 1982 (three; also one Pintail Snipe) and during 1–6 March 1983 (a male and female); one male plus one downy young in pin on 20 February 1983 at a possible nest in a buffalo footprint. There are few recent Lao records of this species, with none from Vientiane (Cunningham 2001, Duckworth *et al.* 2002, Poulsen in prep.), although there is a record from the Mekong plain a little downstream: a single at Pakxan on 22 September 2002 (C. Wood *in litt.* 2002). Whether the small number of records reflects genuine scarcity, rather than just limited observation in suitable habitat, is unclear.

GREAT THICK-KNEE *Esacus recurvirostris* At Risk in Laos

Champasak: Present on 8 December 1962. Great Thick-knee is now the scarcest and most localised channel-breeding wader in the Mekong basin, although it persists both up- and downstream of Vientiane (Lekagul and Round 1991, Thewlis *et al.* 1998, Duckworth *et al.* 2002, Poole *et al.* in prep.). The longstanding lack of records from Vientiane suggests it is more sensitive to human activity than are River Lapwing, Little Ringed Plover or Small Pratincole; the first persisted into the 1960s (below) and the other two remain today (e.g. Duckworth *et al.* 2002).

LESSER SAND PLOVER *Charadrius mongolus*

Vientiane: A rare passage migrant, noted up until 15 April; no records in the notebook or index cards, but noted in the 1963 letter. This latter information was reconfirmed in 2002 to be correct. There are no recent Lao records, although some of the unidentified sand plovers in various sources may well have been this species.

RIVER LAPWING *Vanellus duvaucelii* At Risk in Laos

Vientiane: Recorded during 1962–1964, and remembered as possibly 'fairly common'.
Louangphabang–Pak Ou: Present on 26–28 December 1963. The species persists around Louangphabang (Duckworth *et al.* 2002), but Vientiane is one of few sites where local extinction can be demonstrated (others include parts of Savannakhet province: Evans 2001). Current distribution in southern Laos suggests that the species is susceptible to human pressure (Duckworth *et al.* 1998b).

GREY-HEADED LAPWING *Vanellus cinereus* Potentially At Risk in Laos

Vientiane: Recorded during 1962–1964; 10 flying west on 27 February 1983, and eight south on 30 October 1983. There is no particular evidence for decline of this non-breeding visitor (which still occurs around Vientiane: see Appendix), but as a large bird of open areas it must be at some risk.

[RED-WATTLED LAPWING *Vanellus indicus*]

Vientiane: Listed provisionally on WWT's index cards for the 1960s visit, but not recorded in the notebook. This species has declined markedly in North Laos (Duckworth *et al.* 2002) and was clearly not common around Vientiane even in WWT's time. Round (2002) also suspected a decrease in Thailand's northern plains, with harvesting of eggs and young driving the decline.

ORIENTAL PRATINCOLE *Glareola maldivarum*

Vientiane: 25+ on 14 March 1982 (at Bung That Louang); 34 on 28 March 1982; two fledged young on 2 May 1982; six on 9 May 1982; one during 21–27 March 1983; three during 28 March–4 April 1983; 20+ on 24 April 1983 (at Bung That Louang); two during 1–7 May 1983; additionally, one unidentified pratincole during 14–20 March 1983. This is the first indication of breeding in Laos by Oriental Pratincole, assessed by Duckworth *et al.* (1998a, 1999) to be a passage migrant, occurring particularly in April and May. This pattern is corroborated by these records; Evans (2001) had already extended occurrence to March. It has been long known as a breeder in adjacent parts of Thailand, but now may be declining there through changing farming practices (Round 2002). Breeding populations around Hong Kong also seem to have declined or disappeared (Carey *et al.* 2001).

SMALL PRATINCOLE *Glareola lactea* Potentially At Risk in Laos

Vientiane: Present during 1962–1964; specifically recorded on 2, 15 and 29 (when 'common') December 1962 and 12 April 1964; one on 24 June 1982.
Louangphabang–Pak Ou: Present on 26–28 December 1963. Small Pratincole remains common in

both these areas (Duckworth *et al.* 2002), and indeed there is no particular evidence to suggest that it is sensitive to human pressure (Evans 2001). The lack of regular records in the 1980s would better be taken to suggest that WWT was not then going much to the Mekong river (see also Grey Heron), rather than indicating a temporary local extinction.

RIVER TERN *Sterna aurantia* At Risk in Laos

Vientiane: Present during 1962–1964 (specifically recorded on 12 April 1964); remembered as 'uncommon'. **Champasak:** Present on 8 December 1962. Breeding tern populations have collapsed in Laos, although birds remain in both Vientiane and Champasak provinces (reviewed in Thewlis *et al.* 1998, Duckworth *et al.* 2002).

BLACK-BELLIED TERN *Sterna acuticauda* At Risk in Laos

Vientiane: Present during 1962–1964, and remembered as 'a bit more common' than River Tern; it was specifically recorded on 15 and 29 (80+ birds) December 1962. Formerly an abundant breeder in at least parts of Laos (e.g. Engelbach 1932), this species is now extinct in the country, and may be reduced to only two pairs in the entire Mekong catchment (reviewed in Thewlis *et al.* 1998, Timmins and Men Soriyun 1998).

BLACK KITE *Milvus migrans* At Risk in Laos

Vientiane: Present during 1962–1964 (specifically recorded on 4 or 7 and 9 or 19 October 1962), and both *M. m. govinda* and *M. m. lineatus* were remembered as occurring, with one (unremembered) more common than the other; a flock of five seen on 10 October 1983. **Pakxe:** Present on 8–9 December 1962. This is the first evidence for *M. m. govinda* in Laos, although some historical sources (e.g. David-Beaulieu 1949–1950) cautioned the difficulty of distinguishing the forms in the field, indicating that the taxon may well have been previously overlooked. *M. m. lineatus* was formerly common throughout Laos. There have been no flocks since this 1983 record, and only a few singles, including in Vientiane (reviewed in Thewlis *et al.* 1998, Duckworth *et al.* 1999, 2002). Wintering populations have also decreased greatly in Thailand (Round 2002), although they seem to have remained stable in Hong Kong (Carey *et al.* 2001).

BRAHMINY KITE *Haliastur indus* At Risk in Laos

Vientiane: Present on 29 December 1962, and remembered as 'less common' during the 1960s, this possibly being the only record. The species is effectively extinct in North and Central Laos (Thewlis *et al.* 1998, Duckworth *et al.* 1999, 2002), with no subsequent Vientiane records. There is one recent record from North Laos: one dead on the Mekong shore at Pakxan in early January 2000 (C. Wood *in litt.* 2002). It may never have been particularly common in North Laos (see Bangs and Van Tyne 1931, David-Beaulieu 1944, Delacour and Greenway 1940).

[WHITE-RUMPED/SLENDER-BILLED VULTURE *Gyps bengalensis*/*Gyps tenuirostris* At Risk in Laos]

Vientiane: Present during 1962–1964 (specifically recorded on 26 August 1962); remembered as 'only a few'. The notebook lists only *G. bengalensis*, the index

cards only *G. indicus* (= *tenuirostris*). **Pakxe:** *G. bengalensis* present on 8–9 December 1962. While reviewing in detail the distribution of Asian *Gyps* species, P. C. Rasmussen (*in litt.* 2003) has found that there has clearly been much confusion over the identification and ageing of Asian vultures right up to the present day. Thus, these records, while undoubtedly referring to a *Gyps* species, are not assigned conclusively to either species. Both species formerly occurred throughout Laos but are now restricted to the two southern provinces of Champasak and Attapu (reviewed in Thewlis *et al.* 1998). They are now very scarce throughout South-East Asia, but the causes and timing of decline remain somewhat unclear (Pain *et al.* 2003, Duckworth *et al.* *in press*). The genus seems to have disappeared from Vientiane between WWT's two visits.

RED-HEADED VULTURE *Sarcogyps calvus* At Risk in Laos

Vientiane: Present during 1962–1964 (specifically recorded on 26 August 1962); remembered as 'only a few'. **Pakxe:** Present on 8–9 December 1962. This species formerly occurred throughout Laos but is now restricted to the two southern provinces of Champasak and Attapu (reviewed in Thewlis *et al.* 1998). It is now very scarce throughout South-East Asia, but the causes and timing of decline remain somewhat unclear (Duckworth *et al.* *in press*). It seems to have disappeared from Vientiane between WWT's two visits.

HEN HARRIER *Circus cyaneus*

Vientiane: Single males on 19 October 1962 and 23 February 1963 (near Ban Thadua), and recorded on 15 and 16 March 1963 (Xieng Sou island and Houa Khoua respectively); one male and one female on 16 January 1982; one on 7 November 1982. There are two other records of Hen Harrier from North Laos, and one from Central Laos (reviewed in Duckworth *et al.* 1998a).

GREATER SPOTTED EAGLE *Aquila clanga* Little Known in Laos

Vientiane: Singles on 23 December 1962 (near Ban Thanaleng) and, both provisionally identified, on 20 or 21 February 1983 (over That Louang marsh) and during 7–17 November 1983. There are few records of this species from Laos, but their dates (in Thewlis *et al.* 1998, Duckworth *et al.* 1999) together with the recent confirmation of significant numbers wintering in Cambodia (BirdLife International 2001, Davidson 2001) suggest that it is a regular passage migrant through Laos.

DARTER *Anhinga melanogaster* At Risk in Laos

Vientiane: Present by the Thadua road (which runs downstream along the Mekong river) on 23 September 1962. It was remembered as 'not common', but there was certainly more than one record during the 1960s period. Darters were formerly common along the Mekong river, including in North Laos, but are now only erratic visitors to the country (reviewed in Thewlis *et al.* 1998). There are no subsequent Vientiane records.

[LITTLE CORMORANT *Phalacrocorax niger* At Risk in Laos]

Vientiane: One, provisionally identified, on 30 May 1982 (notebook); noted as present in the 1960s (index-

cards). This is a tantalising indication, because Little Cormorant has not been recorded from North Laos since Oustalet (1898) or, potentially, Bingham and Thompson (1901). It seems to have already been in significant national decline by the 1940s (reviewed in Thewlis *et al.* 1998).

LITTLE EGRET *Egretta garzetta*

Vientiane: Present during 1962–1964 (specifically recorded on 12 April 1964), on 29 August 1982 (two, provisionally identified), 10 September 1982 (four), 31 October 1982 (one unidentified egret), 7 November 1982 (two unidentified egrets), 15 November 1982 (17, provisionally identified), 28 November 1982 (one unidentified egret), and on 31 August 1983 (six). **Louangphabang:** Present on 26–28 December 1962. **Pak Ou:** One on 31 July 1983. **Vangveun:** 20+ unidentified egrets ('heronry') on 14 September 1982. It was not established whether the birds were breeding (the observation was probably made from helicopter), but September might be more likely for an aggregation of passage birds rather than breeders. Little Egret has been observed recently at several sites in Laos, where it is mainly a passage migrant (e.g. Duckworth *et al.* 1998a, 2002), but there may be no recent records from Vientiane city (see Appendix). The summer Pak Ou date does not necessarily indicate local breeding, because non-breeders remain around Ban Sivilai all year (J. W. K. Parr in Duckworth *et al.* 1999). There seems to be no evidence of the species ever having bred in Laos.

GREY HERON *Ardea cinerea* Potentially At Risk in Laos

Vientiane: Present during 1962–1964 (specifically recorded on 25 October 1962). The lack of records in the 1980s is surprising, because the species still visited the Mekong river in Vientiane in the 1990s (Duckworth *et al.* 2002); perhaps WWT spent only limited time along the Mekong river in the 1980s.

PURPLE HERON *Ardea purpurea* Potentially At Risk in Laos

Vientiane: Two captive fledged young on 12 September 1962; this species was remembered as 'rare' during the 1960s; singles on 20 December 1981, 1 January 1982, 24 April 1983, and during 25–30 April 1983; one unidentified heron during 26 September–2 October 1983. Purple Heron still occurs widely across Laos but has probably declined (reviewed in Thewlis *et al.* 1998). Breeding was suspected in South Laos in 1998 (Round 1998), but this is the first evidence from the country. In contrast to Grey Heron, in Laos this species is infrequent in major river channels (e.g. the Mekong), occurring more usually in marshes and other floodplain habitats (Duckworth *et al.* 2002).

GREAT EGRET *Casmerodius albus*

Vientiane: Present during 1962–1964 (specifically recorded on 25 October 1962); singles on 2 January and 14 September 1982. Great Egret has been observed recently at several sites in Laos, where it is mainly a passage migrant (e.g. Duckworth *et al.* 1998a, 2002). There may be no recent records from Vientiane city (see Appendix).

CATTLE EGRET *Bubulcus ibis*

Vientiane: Recorded during 1962–1964; 13 on 28 November 1982, one on 5 December 1982, two on 24 April 1983, 15+ during 26 September–2 October 1983, 27 during 3–9 October 1983, 20+ during 17–23 October 1983, 10+ during 24–31 October 1983, and 24 during 7–17 November 1983. Cattle Egret has recently been recorded at various sites in Laos (Thewlis *et al.* 1996, Duckworth *et al.* 1998a, 2002, Round 1998, Evans *et al.* 2000, Evans 2001, Davidson in prep.), mostly in small numbers. Substantial numbers (up to 400) occur at the protected wetland of Ban Sivilai (Parr and Parr 1998) and over 500 were seen at Bung Gnai-Kiatngong near Xe Pian NBCA on 16 December 1992 (T. D. Evans *in litt.* 2003). There may be no records from Vientiane city (see Appendix), corroborating the suggestion of decline in the Upper Lao Mekong river (Duckworth *et al.* 2002: 19).

BLACK-CROWNED NIGHT HERON *Nycticorax nycticorax* Potentially At Risk in Laos

Vientiane: Recorded during 1962–1964, and remembered as 'uncommon'. There are few recent records from Laos, although it was recorded in Vientiane occasionally in the late 1990s (Duckworth *et al.* 1999, 2002 [accidentally omitted from (untitled) Appendix 1 in the latter]).

STORK sp. Ciconiidae At Risk in Laos

Vientiane: Although not noted in the written record for the 1960s (which is largely restricted to birds identified to species), unidentified storks were remembered as 'present' in that period. At least 20 at Ban Thadua on 12 February 1982; one (perhaps Woolly-necked Stork *Ciconia episcopus*) on 13 June 1982; three big birds, perhaps storks, ibises, herons or hornbills, on 11 July 1982. Storks were still common in Bangkok during the 1960s (King 1991), but, as in Vientiane, they have now disappeared (except for descendants of zoo birds). The June–July 1980s records recall the June 1996 record of Painted Stork near Vientiane (Thewlis *et al.* 1998). Storks (other than the long-distance migrant Black Stork *C. nigra*) occur regularly in Laos nowadays only in the southern provinces of Champasak and Attapu (Duckworth *et al.* 1999). Formerly, several species visited the Upper Lao Mekong river (Bangs and Van Tyne 1931, Delacour and Greenway 1940), and there is an extraordinary recent record of four high-flying Woolly-necked Storks in far northern Vietnam (Tordoff 2002).

GOLDEN-FRONTED LEAFBIRD *Chloropsis aurifrons*

Vientiane: A single in the Wat Nak garden on five dates between 28 December 1981 and 24 January 1982. This is apparently the first recent record from North Laos, although there is a historical record from close to Vientiane, at Ban Thangon (Bangs and Van Tyne 1931). Other historical records in North Laos came from Xiangkhouang (David-Beaulieu 1948), Louangphabang and along the Nam Ou (d'Orleans 1894, Oustalet 1899–1903).

RUFIOUS TREEPIE *Dendrocitta vagabunda*

Vientiane: One (provisionally identified) on 17 August 1983, and two on 30 October 1983. These are the only records from North Laos. It remains widespread in South Laos (Thewlis *et al.* 1996, Evans and Timmins 1998, Round 1998, Evans *et al.* 2000, Davidson in prep.) but has not been recorded in the Centre since David-Beaulieu (1949–1950). The absence of subsequent records in Vientiane may simply reflect lack of observer activity in deciduous dipterocarp forest on the Vientiane plain.

LARGE-BILLED CROW *Corvus macrorhynchos*

Vientiane: Present on 4 or 7 October 1962, and remembered as 'fairly common'; one during 2–9 November 1981 and, provisionally identified, 1–5 December 1981. **Pakxe:** Present on 8–9 December 1962. **Houay Khong:** Present on 8 December 1962. **Champasak:** Present on 8 December 1962. **Attapu:** Present on 8 December 1962. **Louangphabang–Pak Ou:** Present on 26–28 December 1963. **Ban Phonsavan, Xiangkhouang:** Two during 19–23 November 1982. Although Large-billed Crow was not identified as a key species for conservation by Duckworth *et al.* (1999), this was a gross oversight. Populations have demonstrably declined (often to local extinction) in northern Laos, including Xiangkhouang, where none was seen in 1999–2000 (Duckworth *et al.* 2002). WWT's 1980s visit probably caught the species at the end of its existence in Xiangkhouang and in Vientiane. The species still visits the Ban Thadua area occasionally, presumably by crossing the Mekong river from Thailand (February 1999: Duckworth *et al.* 2002; two on 8 March 2000; T. D. Evans *in litt.* 2003).

ROSY MINIVET *Pericrocotus roseus* / SWINHOE'S MINIVET *P. cantonensis*

Vientiane: Six on 28 February 1982. During the 1960s–1980s, these two species were widely regarded as conspecific (e.g. by King *et al.* 1975). Swinhoe's Minivet is a not uncommon non-breeding visitor to Laos (e.g. Thewlis *et al.* 1998), recorded as close to Vientiane as Sangthong (Duckworth 1996). There are very few recent records of Rosy Minivet from Laos, apparently only those from Houay Nhang and Xe Pian in Thewlis *et al.* (1996).

COMMON WOODSHRIKE *Tephrodornis pondicerianus*

Vientiane: Singles on 1–4 March 1982 (provisionally identified) and during 28 March–4 April 1983. These are the only records from North Laos, although the species is common in South and Central Laos (Engelbach 1932, David-Beaulieu 1949–1950, Thewlis *et al.* 1996, Duckworth *et al.* 1998a, Evans and Timmins 1998, Round 1998, Davidson in prep.). The lack of subsequent records in Vientiane may simply reflect lack of observer activity in deciduous dipterocarp forest on the Vientiane plain.

BLACK-COLLARED STARLING *Sturnus nigricollis*

Vientiane: Present during 1962–1964 (specifically recorded on 13 October 1962); four on 30 May and 13 June 1982. **Attapu:** Present on 8 December 1962. **Salavan:** Present on 9 December 1962. **Louangphabang–Pak Ou:** Present on 26–28

December 1963. This species is now patchy in occurrence in Laos and there is good evidence to suggest at least local declines (Duckworth *et al.* 2002). There are no recent records from Vientiane (see Appendix).

VINOUS-BREASTED STARLING *Sturnus burmannicus*

Vientiane: Five during 21–27 March 1983. This is the only record from North Laos. Recent Lao records come only from South Laos (e.g. Thewlis *et al.* 1996, Duckworth *et al.* 1998a, Evans *et al.* 2000), but it was recorded in Savannakhet, Central Laos, by David-Beaulieu (1949–1950). The lack of subsequent records in Vientiane may simply reflect lack of observer activity in deciduous dipterocarp forest on the Vientiane plain.

COMMON MYNA *Acridotheres tristis*

Vientiane: Present during 1962–1964 (specifically recorded on 24 September 1962: a full month after WWT's arrival). In the 1980s, clearly scarce: recorded on only 35 lists, most counts of only 1–2 birds, the highest six. In addition, there was a flock of 18 unidentified mynas on one date. **Pakxe:** Present on 8–9 December 1962. This 1980s statistic compares with presence on well over a hundred lists for other town birds such as Asian Palm Swift, Red-whiskered Bulbul and Common Tailorbird. The scarcity of Common Myna in Vientiane city in the 1990s was striking by comparison with Thailand, and these records indicate a similar status for at least 20, probably 40, years. It may even have increased by the late 1990s, because daily counts of several dozen were sometimes made, and a roost near That Dam in the city centre contained several hundred individuals. However, the species was not recorded in the more rural parts of Vientiane municipality surveyed in the 1990s, Houay Nhang and Sangthong (Thewlis *et al.* 1996, Duckworth 1996), both of which comprised apparently suitable habitat. There is good evidence for a widespread decline in at least North Laos: the species was unrecorded in 1999–2000 in two extensive farming areas in which it had previously abounded (reviewed in Duckworth *et al.* 2002: 16–17 and 20). Although it seems unlikely that the species could be at risk of extinction in Laos, a better understanding of its current scarce and local status is warranted.

WHITE-VENTED MYNA *Acridotheres cinereus*

Vientiane: Present during 1962–1964 (specifically recorded on 9 December 1962: nearly four months after WWT's arrival). In the 1980s, recorded only once: two on 22 May 1982. **Pakxe:** Present on 8–9 December 1962, and six on 14–15 September 1982. **Salavan:** Present on 9 December 1962. White-vented Myna was considerably scarcer than Common Myna in 1990s Vientiane, with possibly only one record from the entire municipality (two at Ban Thadua in May 1993). It was clearly also rare in the 1980s, and quite possibly in the 1960s. The evidence for a widespread decline in at least North Laos (reviewed in Duckworth *et al.* 2002: 16–17 and 20) begs a better understanding of its current status.

HILL MYNA *Gracula religiosa*

Vientiane: Present during 1962–1964 (specifically recorded on 9 September 1962); also many caged birds recorded. Although Hill Myna (among the most popular cagebirds in Laos; Thewlis *et al.* 1998, Duckworth *et al.*

1999, Cunningham 2001) has probably declined locally, good numbers persist as close to Vientiane as Sangthong. Hence it was not considered a key species for conservation by Thewlis *et al.* (1998). It seems to have disappeared from Vientiane between the 1960s and 1980s, as have many other birds of closed forest, reflecting local habitat loss.

PLAIN MARTIN *Riparia paludicola* At Risk in Laos

Vientiane: At least one on 10 April 1982. Plain Martin is rare in Vientiane city, but good numbers persist slightly downstream and, particularly, upstream (Thewlis *et al.* 1998, Duckworth *et al.* 2002).

WIRE-TAILED SWALLOW *Hirundo smithii* Potentially At Risk in Laos

Vientiane: Common on 29 December 1962, but it is not clear how many other times it was recorded; singles on 28 November 1982 (provisionally identified) and during 24–31 October 1983. **Louangphabang–Pak Ou:** Present on 26–28 December 1963. There are no recent records of Wire-tailed Swallow for Vientiane city, but good numbers persist a little upstream, at Sangthong. It still occurs around Louangphabang. The numbers at Sangthong fluctuate markedly with season (Thewlis *et al.* 1998, Duckworth *et al.* 2002), hindering any assessment of whether the species might have disappeared from Vientiane; these 1960s observations could merely reflect short-distance dispersal from upstream.

BRIGHT-HEADED CISTICOLA *Cisticola exilis*

Vientiane: Singles (provisionally identified) on five dates from 9 May 1982 to 2 October 1983. These are the first records for Laos. Despite the initial caution, the identification is doubtless correct; Bright-headed Cisticola is now common in Vientiane (see Appendix) and occurs elsewhere along the Lao Mekong river, probably as a recent colonist (Evans 2001, Duckworth *et al.* 2002).

[BROWN PRINIA *Prinia polychroa*]

Vientiane: One on 15 November 1982. This is the only record, albeit provisional, for North Laos. Other Lao records come only from Savannakhet province and southwards (David-Beaulieu 1949–1950, Thewlis *et al.* 1996, Duckworth *et al.* 1998a, Round 1998, Evans *et al.* 2000, Davidson in prep.). The lack of subsequent records in Vientiane may simply reflect lack of observer activity in deciduous dipterocarp forest on the Vientiane plain.

CHESTNUT-FLANKED WHITE-EYE *Zosterops erythropleurus*

Vientiane: At least two on 30 January 1983 (at least 20 [Oriental White-eyes] also present). This is the first record of Chestnut-flanked White-eye for Laos, pre-dating Dymond (1995). The frequent subsequent records (reviewed in Duckworth *et al.* 2002) suggest it is not uncommon in Laos.

AUSTRALASIAN BUSHLARK *Mirafra javanica*

Vientiane: One during 11–16 October 1983. The Lao status of this species is unclear (Duckworth *et al.* 1998a, 1999). Although it is generally considered resident in

South-East Asia (e.g. Robson 2000), all Lao records (as this one) come from migration seasons.

[PURPLE-THROATED SUNBIRD *Nectarinia sperata*]

Vientiane: Two during 17–23 October 1983. This is the only record from North Laos, albeit provisional. Previous records come only from South Laos (Engelbach 1932, Thewlis *et al.* 1996, Round 1998, Evans *et al.* 2000). There is no obvious ecological reason why this species should not extend up the Mekong plain, and it has perhaps been overlooked.

PLAIN-BACKED SPARROW *Passer flaveolus*

Vientiane: Recorded during 1962–1964, and every month, several times in most, between November 1981 and November 1983. Counts in the 1980s were usually of single figures (much smaller than for Eurasian Tree Sparrow), occasionally up to 20, and once at least 30. No seasonal pattern is apparent. Plain-backed Sparrow seems to have withdrawn from Vientiane: the last record was in December 1994 (Duckworth *et al.* 1998a). It may have shown a similar departure from other urban areas in Laos, e.g. Pakxe, where it was recorded by Engelbach (1932), but neither by us (e.g. Thewlis *et al.* 1996), nor by Poulsen (in prep.).

CITRINE WAGTAIL *Motacilla citreola*

Vientiane: Up to 10 (usually 1–5) on 25 lists, between 12 December 1981 and 4 April 1982, and between 13–19 December 1982 and 28 March–4 April 1983. These are the first records for Laos, although the species has subsequently been found regularly in Vientiane and occasionally elsewhere in North Laos (reviewed in Duckworth *et al.* 2002).

BAYA WEAVER *Ploceus philippinus* Potentially At Risk in Laos

Vientiane: Recorded during 1962–1964; a nest on display in a house 9 December 1981; one bird on 10 January 1982; one nest during 14–20 August 1983 (unclear whether in the field, or in a house/shop). **Pakxan:** A nest collected on 7 September 1962. **Ban Houayxai:** Recorded in February 1964. This species is localised in Laos today, but significant numbers remain upstream of Ban Houayxai (Duckworth *et al.* 2002). Nests are still commonly displayed, but whether their collection threatens the population is unclear. There are too few historical records to evaluate whether the species has declined; possibly it is naturally scarce in the country.

[BLACK-HEADED MUNIA *Lonchura malacca* Little Known in Laos]

Vientiane: One (provisionally identified) on 1 January 1982. Black-headed Munia, if still extant in Laos, may well be among the most threatened birds in the country. Habitat use in adjacent countries, and the location of the only certain record (Ban Muangyo: Bangs and Van Tyne 1931) suggest that it inhabited rank floodplain vegetation. Most of this has disappeared from Laos. Even though WWT maintained this as only a provisional record, it seems plausible that the Vientiane plain would formerly have held suitable habitat. The species was, however, not mapped for adjacent Thailand in Lekagul and Round (1991).

YELLOW-BREASTED BUNTING *Emberiza aureola*

Vientiane: Recorded during 1962–1964. During 1981–1983, recorded in October (one on 23 October 1982), November (six lists), December and January (two lists each), March (one during 21–27 March 1983), April (four lists) and May (three on 2 and one on 9 May 1982). Most counts were of 20+ or under, with larger numbers on 10 April 1982 (100+), 24 April 1983 (200+) and 14 November 1982 (100+). These records indicate the species was more numerous on passage than in mid-winter. The rather few recent records from the Vientiane area may indicate only the limited amount of observation; large numbers still occur at least occasionally (Duckworth *et al.* 2002). However, the species has certainly declined in some parts of Cambodia where it was formerly common, e.g. Prey Veng province. Whether this represents a wider decline is as yet unclear (C. M. Poole verbally 2003).

BLACK-FACED BUNTING *Emberiza spodocephala*

Vientiane: Singles on 10 January 1982 and (a male) on 24–31 October 1983. The furthest downstream that this species was previously recorded in the Mekong plain was around Ban Houayxai (Duckworth *et al.* 2002). However, the extensive suitable habitat downstream from there to Sangthong has been barely searched on foot, and it would be difficult to find the species from a boat.

VIENTIANE'S BIRDS FROM THE 1960s TO THE 1990s

Table 2 suggests possible changes in birds of Vientiane between the 1960s, 1980s and 1990s. Some apparent changes may in reality merely reflect differences of observation style, including localities visited. Of more significance are the cases where WWT's information can be compared between his two periods, and/or with observations in the 1990s, sufficiently meaningfully to suggest real changes have taken place.

Declines

Comparison of the 1960s–1980s data with those from the 1990s suggests many major declines have taken place in Vientiane. Minor declines would not be noticeable, given the methodological differences between datasets. Declining species fit into several broad categories, while most species for which there is no suggestion of major decline are small-bodied habitat generalists, and/or Palaearctic migrants. Species in these latter groups are not discussed further. To try to indicate the comprehensiveness of decline for each identified category, all relevant species recorded in Vientiane by WWT are split across three classes: (1) evidence suggestive of a decline; (2) no such suggestion; (3) species too scarce to comment (Table 2). All categorisations are necessarily speculative. To be certain, information would be needed on effort (time in the field) and location. These data simply do not exist, for any of the three decades under review.

Forest habitats

Comparing today's habitat cover with a map of forest in the Vientiane area in the 1950s (Vidal 1960) reveals

a major decline in cover. Losses significant at the local level in birds of deciduous dipterocarp forest and in semi-evergreen/mixed deciduous forests have therefore occurred. Because these reflect local habitat change, they may be of only local concern.

Extensive semi-evergreen/mixed deciduous forests remains in Laos, and even persists in Vientiane municipality (at Sangthong). Many bird species of these habitats seem to have disappeared from Vientiane city (Table 2). It is particularly noteworthy that even in the 1960s, woodpeckers, most barbets, hornbills, Banded Kingfisher *Lacedo pulchella*, trogons, most broadbills, Blue-winged Leafbird *Chloropsis cochinchinensis*, Common Green Magpie *Cissa chinensis*, Velvet-fronted Nuthatch *Sitta frontalis* and most forest babblers were unrecorded. Caution over identification may well have led to under-recording of at least some of these, but they are very similar to the groups that were found in an unpublished analysis from Laos to be absent from today's small, degraded, heavily hunted, forest isolates (T. D. Evans *in litt.* 2002).

In North Laos, deciduous dipterocarp forest is almost restricted to floodplains of large rivers. A lot of such flat land has been converted to agriculture, settlement and other human uses, meaning that the specialist birds may now be quite scarce. Several species are not known from North Laos other than through WWT's records, but recent observer activity in this habitat in North Laos has been almost non-existent. Significant areas of deciduous dipterocarp forest remain in South Laos, and decline of the specialist avifauna is not yet a trend of national concern. Some specialists were found only in the 1960s and are therefore listed in Table 2 as 'not assessable' (because, theoretically, in the 1960s even a chance occurrence would put the species on the list of birds found). Therefore, the true loss of deciduous dipterocarp forest birds is probably underestimated by Table 2.

River channels, non-flowing wetlands and other open habitats

Changes in the non-forest habitats in and around Vientiane, for example, the intensification and loss of floodplain wetlands, reflect the national trends more closely than with forests, at least partly because these habitats are restricted in occurrence and offer many uses to people. Therefore, few if any are left undisturbed anywhere in Laos. Changes detectable in the Vientiane bird life may therefore indicate national patterns. For most open-country birds in Table 2, many of which are non-forest generalists rather than open-country specialists, suitable habitat remains abundant in and around Vientiane, as it does throughout Laos. Therefore, presumably most or all of these species declined, some to the brink of national extinction, through persecution. However, this is not provable, and other factors, e.g. pollution, may be relevant.

The decline of river-channel breeders in the Lao Mekong river, reviewed in Thewlis *et al.* (1998), Cunningham (2001) and Duckworth *et al.* (2002), probably reflects a mix of direct persecution and incidental disturbance. Anthropogenic changes to water and sediment flow may become increasingly significant for such birds as remain. The absence of records of Blue-tailed Bee-eater *Merops philippinus* and Great Thick-knee

is noteworthy, because Vientiane is within their modern range and has potentially suitable habitat (the bee-eater is common in and around Phnom Penh; Goes and Poole 2003, Thomas and Poole 2003, this issue).

Declines of birds of non-flowing wetlands in Laos have not been as much discussed, although some birds were added to the list of key species in Duckworth *et al.* (1999). Larger birds of these habitats suffer persecution and incidental disturbance (e.g. Cunningham 2001), while direct habitat change is probably very important to birds of all sizes. Few non-flowing wetlands survive in Laos in even a semi-natural state. Those that do, support heavy harvests of aquatic animals and plants. Moreover, wetlands are particularly sensitive to pollution. Intensifying agriculture is likely soon to divest remaining semi-natural areas, and rice paddies, of much bird interest, judging by events in Thailand (Round 2002). The absence of several wetland species from WWT's records is noteworthy. Spot-billed Duck *Anas poecilorhyncha* and Purple Swampphen *Porphyrio porphyrio* still occur round Vientiane, the duck along the Mekong river even in the town (e.g. Perennou *et al.* 1990, Evans *et al.* 2000). Perhaps some of WWT's unidentified ducks were Spot-billed Ducks. Two species of jacana (Pheasant-tailed Jacana and Bronze-winged Jacana *Metopidius indicus*) occur in Laos. Neither was commonly seen (by WWT or in the 1990s), and they probably merit a nationwide status review. Finally, among large waterbirds, White-shouldered Ibis *Pseudibis davisoni* (Black Ibis *P. papillosa davisoni* in Inskipp *et al.* 1996) was formerly common in Lao wetlands but now verges on national extinction (reviewed in Thewlis *et al.* 1998). WWT's lack of records suggests it was already decreasing by the early 1960s, as in Cambodia (Thomas and Poole 2003, this issue).

Ardeids and sturnids

These two families are treated specifically because they contain a disproportionate number of species that have declined in Laos, but were not listed as key species for conservation by Duckworth *et al.* (1999). They were thought to be low priorities for status review, because they are considered adaptable to modified habitats, and few if any species are globally threatened or are even at risk in Thailand (*sensu* Treesucon and Round 1990). Bird surveys in Laos during the 1990s focussed on wilderness areas potentially suitable to be landscape-level national biodiversity conservation areas. These were primarily forests: no extensive wetlands remain natural. Moreover, in 1992, in the absence of recent bird status information for Laos, the national at risk classification for Thailand (Treesucon and Round 1990) was taken as a basis for reporting in Laos (Thewlis *et al.* 1998). Egrets, starlings and mynas remain widespread in Thailand, so most species of them did not appear on this list. By contrast, it is now clear that populations are not buoyant in Laos.

WWT saw egrets regularly in Vientiane in the non-breeding season, whereas during the 1990s the only records from the city seem to have been of one or more sightings of birds migrating along the Mekong river (RJT unpublished). Up to two Little Egrets were twice seen in December 1996–January 1997, at Ban Mai island, upstream of Vientiane (RJT unpublished; site 8 in Fig. 4 of Duckworth *et al.* 2002; note that sites 9–18 in the

caption to Fig. 4 should be numbered as 8a–17, in order to accord with numbers in the figure). This evidence for decline strengthens the concern expressed in Duckworth *et al.* (2002) for egrets. There seem to be no historical accounts of colonial ardeids breeding in Laos, although based on occurrence in Thailand and Vietnam (e.g. Stusak and Vo Quy 1986), they clearly should have been doing so. It seems quite conceivable that because plains wetlands are relatively restricted in Laos (by contrast with Thailand, Vietnam and, especially, Cambodia) and have been heavily settled by people for centuries, that open-country colonial ardeids did formerly breed, but were eradicated prior to the arrival of European zoologists. The only large ardeid known to breed in Laos today is Malayan Night Heron *Gorsachius melanolophus*. Its secretive, non-colonial, forest dwelling habits doubtless help it to remain widespread (Duckworth *et al.* 1999) in the face of high opportunistic harvesting. The more conspicuous non-forest ardeids occur primarily only as passage migrants, and in surprisingly low numbers. Only a few wintering areas are known: the northern zone beside Xe Pian NBCA, Ban Sivilai, and parts of the Upper Lao Mekong river (Thewlis *et al.* 1996, Parr and Parr 1998, Duckworth *et al.* 2002). However, other potentially suitable areas probably exist but have not been visited. The causes of the low numbers are probably specific to Laos, reflecting hunting (Cunningham 2001, Duckworth *et al.* 2002), because populations in Hong Kong of all species except Purple Heron have remained stable or increased (Carey *et al.* 2001). The situation at Ban Sivilai (Parr and Parr 1998) indicates potential numbers of wintering birds, were persecution to be controlled nationally. Whether these could colonise as breeders is unclear.

The sturnids seem to have declined in Vientiane even earlier than the wintering ardeids, assuming that there is no natural ecological reason for their low numbers: they were no commoner in the 1980s than in the 1990s, and apparently were not common even in 1960s Vientiane. Yet, as with Large-billed Crow, visitors to other parts of North Laos before the 1950s (e.g. Delacour and Greenway 1940, David-Beaulieu 1944) described them as common, more or less wherever they went. Revisits to the same areas in 1999–2000 found populations much decreased, possibly even effectively locally extinct (Duckworth *et al.* 2002). The reasons behind these demonstrated declines and current low densities warrant investigation.

Increases

Using the 1960s, 1980s and 1990s records to detect increases is very difficult, not only because of potential methodological (including observation site) differences, but also because many species recorded in the 1980s, but not the 1960s, are difficult to find and/or identify. They may well have been effectively impossible for a cautious observer to confirm on field views with the available identification literature of the 1960s. The 1990s observations were very patchy across seasons, and were strongly focussed on the Mekong channel and out-of-town forest fragments. Agricultural and scrub habitats of the Vientiane plain were poorly covered, as were all habitats in the months of May–October. Despite these cautions, it is clear that a few species of disturbed habitats colonised Vientiane, and indeed Laos, during

Table 2. Apparent declines of birds in Vientiane city, 1960s–1990s.

Suggestion of decline	No suggestion of decline ⁶	Not assessable ⁷
<i>Breeding birds of semi-evergreen/mixed deciduous forests¹</i>		
Vernal Hanging Parrot, Green Imperial Pigeon, Bronzed Drongo (c), Black-headed Bulbul (c), Black-crested Bulbul (c), Stripe-throated Bulbul (c), Puff-throated Bulbul, Dark-necked Tailorbird (c), Laughingthrush spp., Buff-breasted Babbler (c), Striped Tit Babbler (c), Ruby-cheeked Sunbird (c)	None	[Green-eared Barbet], [Banded Bay Cuckoo], Crested Serpent Eagle, Crested Goshawk, [Banded Broadbill], Asian Fairy Bluebird, Scarlet Minivet, Large Woodshrike, [Brown-cheeked Fulvetta], [Crimson Sunbird] (c)
<i>Deciduous dipterocarp forest²</i>		
Red-breasted Parakeet, Indochinese Bushlark, Plain-backed Sparrow	None	Grey-capped Pygmy Woodpecker, Black-headed Woodpecker, Lineated Barbet, Blossom-headed Parakeet, Crested Treeswift, Golden-fronted Leafbird, Rufous Treepie, Indochinese Cuckooshrike (? : potential records in 1992 but no confirmation), Common Iora, Common Woodshrike, Vinous-breasted Starling, Sooty-headed Bulbul, [Brown Prinia]
<i>River channel birds³</i>		
Pied Kingfisher, River Lapwing, River Tern, Black-bellied Tern, Darter	Little Ringed Plover, Small Pratincole	[Little Cormorant], Plain Martin, Wire-tailed Swallow
<i>Breeding birds of non-flowing wetlands⁴</i>		
White-throated Kingfisher (c), [Ruddy-breasted Crake], White-breasted Waterhen, Watercock, Greater Painted-snipe, Baya Weaver	Lesser Whistling-duck, cisticolas spp., prinias spp., Paddyfield Pipit, munias spp.	[Cotton Pygmy-goose], Common Moorhen (unclear if breeds), [Pheasant-tailed Jacana] (unclear if breeds), stork sp.
<i>Open-country birds⁵</i>		
Coppersmith Barbet (still present in 1992–1993, but not recorded since), Asian Koel, Barn Owl, Red Collared Dove (m), Oriental Pratincole (no recent breeding records), Black Kite, Brahminy Kite, <i>Gyps</i> vulture, Red-headed Vulture, Shikra, Greater Spotted Eagle (m), Large-billed Crow, Streak-eared Bulbul	Indian Roller, Greater Coucal, Lesser Coucal, Grey-headed Lapwing (m), Black-shouldered Kite, harriers spp. (m), Grey-faced Buzzard (m), Common Kestrel (m), Brown Shrike (m), Black Drongo (m), Blue Rock Thrush (m), Oriental Magpie Robin	Bee-eaters spp., Spotted Dove, [Red-wattled Lapwing], Black Baza (m), Oriental Honey-buzzard (m), Japanese Sparrowhawk (m), Peregrine Falcon (m), Ashy Woodswallow, Black Bulbul
<i>Ardeids</i>		
Little Egret, Great Egret, Cattle Egret, Black-crowned Night Heron	Grey Heron, Purple Heron, pond heron sp., Cinnamon Bittern	Yellow Bittern
<i>Sturnids</i>		
Chestnut-tailed Starling, White-shouldered Starling, Black-collared Starling, Hill Myna	Common Myna	White-vented Myna

(c) = species now apparently absent from central Vientiane but still common at, e.g., Houay Nhang.

(m) = species occurs/occurred only as a non-breeding migrant

¹ some species may also occur in deciduous dipterocarp forest. Red Junglefowl, Silver Pheasant, Emerald Dove, Thick-billed Green Pigeon are excluded because all records may have been of market birds. Species that make local movements and probably do/did not breed on the Vientiane plain (e.g. Lesser Racket-tailed Drongo, Little Pied Flycatcher) are also excluded.

² only species for which deciduous dipterocarp forest is the main habitat.

³ species that are strongly associated with the channel when breeding, whether or not the nest is in the channel

⁴ may also use river channels, but not strongly associated with them. Excludes ardeids and sturnids.

⁵ excludes species strongly associated with wetlands, and all species smaller than a bulbul.

⁶ does not imply that population is healthy; populations may already have been low by WWT's time.

⁷ not assessable at the species level, mainly due to the low numbers of records in WWT's time. However, the numbers of species in this class with no recent record is, in combination, suggestive in itself that at least some species have declined significantly, and therefore these species are noted.

the 1990s: Pied Fantail *Rhipidura javanica*, House Sparrow *Passer domesticus* and (from an introduced population in Thailand) Peaceful Dove *Geopelia striata* (Duckworth *et al.* 1999). Thus, it would not be surprising if there had been some colonists of Vientiane between the 1960s and the 1980s, perhaps Bright-headed Cisticola (resident), Brown-throated Sunbird (resident)

and Citrine Wagtail (winter visitor). They occur right in the town centre and the wagtail and sunbird seem unlikely to have been overlooked during WWT's 1960s observations. The two resident species use disturbed and/or open habitats, and the massive deforestation across Thailand in the latter decades of the twentieth century doubtless fuelled their spread.

Species potentially with stable populations

No species should be assumed to have maintained even a relatively stable population over the period 1980s–1990s, let alone the period 1960s–1990s. The many species recorded frequently in both 1980s and 1990s (bearing in mind that there is very limited information on frequency of recording during the 1960s) could have changed significantly in numbers even without affecting the proportion of days on which they were recorded enough to detect a change. There is an unknown, but perhaps not very large, degree of overlap in observation sites, field time (both total, and seasonal spread), and observer aptitude and attitude, between the 1980s and 1990s. This prevents more rigorous comparison through observed numbers of birds. Finally, many species may have been undergoing not particularly steep changes in population, and because the period of comparison is only about 15 years, it would have been too short to detect such trends. Therefore, it is very likely that the true extent of population change in the avifauna of Vientiane is considerably greater, in terms of number of species involved, than we can detect so far.

CONCLUSIONS

Forest birds have dominated conservation thinking and action across most of the tropics. The perilous state of wetland birds in South-East Asia is now receiving increasing recognition (e.g. BirdLife International 2001: 36), rightly so given that twentieth century national extinctions of birds in Indochina almost all concerned wetland, not forest, birds. Agricultural trends in Thailand suggest that many of the birds of agricultural areas are severely threatened at a local level (Round 2002), and there may be much wider declines to come (e.g. BirdLife International 2001: 37). By fortunate coincidence, most of these wetland and/or agricultural species are widespread in Asia, the tropics, the Old World, or even globally. Few, if any, Indochinese bird species are currently threatened with even regional extinction solely by agricultural intensification. However, in terms of the holistic maintenance of healthy, functioning ecosystems, the loss of these bird populations is a conservation issue. Understanding the severity of the problem is hampered by the lack of baseline data. Round (2002) outlines the sort of fieldwork necessary to build such a baseline for Thailand. These recommendations, if undertaken in Laos, even by only a handful of people, would generate very valuable data. Possibly, these data would be even more valuable than in Thailand, because much of Lao agriculture is still relatively low intensity, although for how much longer this will be the case is unclear. W. W. Thomas's observations are the *only* documentation of the bird communities of the Vientiane plain ever, and are the most comprehensive from human-influenced habitats in any part of Laos. It is apparent that there have already been considerable changes since his time.

Moreover, these observations support previous hypotheses concerning the generally unfavourable conservation status in Laos of most large birds of open country, particularly residents and short-distance migrants, and of most species strongly associated with non-flowing wetlands. Most of the birds of pre-1950

Laos that had disappeared from most of the Mekong plain by the 1990s were still present in the late 1960s, but were largely gone by the early 1980s. This does not mean that the causes for these local extinctions lie in this period: many of the birds concerned, e.g. vultures and terns, possibly live for decades. Their disappearance in the 1970s may have been the final phase resulting from causes operating for many years. Certain species that fit the same patterns seem to have become nationally extinct significantly earlier (e.g. river channel breeders such as Indian Skimmer *Rynchops albicollis*, and wetland large birds such as Little Cormorant), suggesting that indeed there are long-term processes underway.

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REFERENCES

- Bangs, O. and Van Tyne, J. (1931) Birds of the Kelley–Roosevelt expedition to French Indochina. *Publ. Field Mus. Nat. Hist. (Zool. Ser.)* 18: 33–119.
- Bingham, C. T. and Thompson, H. N. (1901, for 1900) On the birds collected and observed in the Southern Shan States of Upper Burma. *J. Asiatic Soc. Bengal* 69 (2): 102–141.
- BirdLife International (2001) *Threatened birds of Asia: the BirdLife International Red Data Book*. Cambridge, U.K.: BirdLife International.
- Brooks, T. and Sørensen, L. (2001) Birdwatching in Houaphanh province, Laos, October 2000. *Bird Conserv. Soc. Thailand Bull.* 18(3): 13–15.
- Carey, G. J., Chalmers, M. L., Diskin, D. A., Kennerley, P. R., Leader, P. J., Leven, M. R., Lewthwaite, R. W., Melville, D. S., Turnbull, M. and Young, L. (2001) *The avifauna of Hong Kong*. Hong Kong: Hong Kong Birdwatching Society.
- Claridge, G. F. (comp.) (1996) *An inventory of wetlands of the Lao P.D.R.* Bangkok: IUCN.
- Cunningham, P. D. (2001) Avian fauna of Done Khone. Pp. 117–124 in Daconto, G. (ed.) *Siphandone wetlands*. Bergamo, Italy: CESVI Cooperazione e Sviluppo.
- David-Beaulieu, A. (1944) *Les oiseaux du Tranninh*. Hanoi: Université Indochinoise.
- David-Beaulieu, A. (1948) Notes sur quelques oiseaux nouveaux pour le Tranninh et même pour l'Indochine. *L'Oiseau et R. F. O.* 18: 133–140.
- David-Beaulieu, A. (1949–1950) Les oiseaux de la province de Savannakhet (Bas-Laos). *L'Oiseau et R. F. O.* 19: 41–84, 153–194; 20: 9–50.
- Davidson, P. (2001) A further twelve new species for Cambodia. *Cambodia Bird News* 7: 26–35.
- Davidson, P. (in prep.) Ornithological records from Laos, December 1996–April 1999.
- Davies, N. B. (2000) *Cuckoos, cowbirds and other cheats*. London: T & A. D. Poyser.
- Delacour, J. and Greenway, J. C. (1940) Liste des oiseaux recueillis dans la province du Haut-Mekong et le royaume de Luang-Prabang. *L'Oiseau et R. F. O.* 10: 25–59.

- Delacour, J. and Jabouille, P. (1940) Liste des oiseaux de l'Indochine française, complété et mise à jour. *L'Oiseau et R. F. O.* 10: 89–220.
- Duckworth, J. W. (1996) Bird and mammal records from the Sangthong district, Vientiane municipality, Laos, in 1996. *Nat. Hist. Bull. Siam Soc.* 44: 217–242 (including errata published at 46: 210–211).
- Duckworth, J. W., Evans, T. D., Robichaud, W. G., Thewlis, R. M., Timmins, R. J. and Tizard, R. J. (1998a) Bird records from Laos, October 1994–August 1995. *Forktail* 13: 33–68 (including errata sheet distributed with *Forktail* 14).
- Duckworth, J. W., Timmins, R. J. and Evans, T. D. (1998b) The conservation status of the River Lapwing *Vánellus duvaucelii* in southern Laos. *Biol. Conserv.* 84: 215–222.
- Duckworth, J. W., Davidson, P. and Timmins, R. J. (1999) Birds. Pp. 69–159 in Duckworth, J. W., Salter, R. E. and Khounbolin, K. (compilers), *Wildlife in Lao PDR: 1999 Status Report*. Vientiane: IUCN–The World Conservation Union, Wildlife Conservation Society, Centre for Protected Areas and Watershed Management.
- Duckworth, J. W., Alström, P., Davidson, P., Evans, T. D., Poole, C. M., Tan Setha and Timmins, R. J. (2001) A new species of wagtail from the lower Mekong basin. *Bull. Brit. Orn. Club* 121: 152–182.
- Duckworth, J. W., Davidson, P., Evans, T. D., Round, P. D. and Timmins, R. J. (2002) Bird records from Laos, principally the upper Lao/Thai Mekong and Xiangkhouang province, in 1998–2000. *Forktail* 18: 11–44.
- Duckworth, J. W., Poole, C. M., Round, P. D., Timmins, R. J., Davidson, P. and Wells, D. R. (in press) Major vulture declines in South-East Asia during the 20th century and inferences on causation. *Bird Conserv. Internat.*
- Dymond, J. N. (1995) Bird records from Laos, December 1995. Unpublished.
- Engelbach, P. (1932) Les oiseaux du Laos méridional. *L'Oiseau et R. F. O.* 2: 439–498.
- Evans, T. D. (2001) Ornithological records from Savannakhet province, Lao PDR, January–July 1997. *Forktail* 17: 21–28.
- Evans, T. D. and Timmins, R. J. (1996) The status of the Green Peafowl *Pavo muticus* in Laos. *Forktail* 11: 11–32.
- Evans, T. and Timmins, R. (1997) Green Peafowl in Laos. *Tragopan* 6: 9–10.
- Evans, T. D. and Timmins, R. J. (1998) Records of birds from Laos during January–July 1994. *Forktail* 13: 69–96.
- Evans, T. D., Towll, H. C., Timmins, R. J., Thewlis, R. M., Stones, A. J., Robichaud, W. G. and Barzen, J. (2000) Ornithological records from the lowlands of Southern Laos during December 1995–September 1996, including areas on the Thai and Cambodian borders. *Forktail* 16: 29–52.
- Goes, F. and Poole, C. M. (2003) Wetlands of the Four-Arms Plain. *Cambodia Bird News* 10: 25–41.
- Inskipp, T., Lindsey, N. and Duckworth, W. (1996) *An annotated checklist of the birds of the Oriental Region*. Sandy, U.K.: Oriental Bird Club.
- Inskipp, T. P. and Mlikovsky, J. (in prep.) Annotated checklist and bibliography of the birds of Indochina.
- Johnsgard, P. A. (1997) *The avian brood parasites: deception at the nest*. Oxford University Press, Oxford, U.K.
- King, B. (1991) Foreword. In Lekagul, B. and Round, P. D. *A guide to the birds of Thailand: 1–2*. Bangkok: Saha Karn Bhaet.
- King, B. F., Woodcock, M. and Dickinson, E. C. (1975) *A field guide to the birds of South-East Asia*. London: Collins.
- Lee, W.-S., Koo, T.-H. and Park, J.-Y. (2000) *A field guide to the birds of Korea*. Seoul: LG Evergreen Foundation.
- Lekagul, B. and Round, P. D. (1991) *A guide to the birds of Thailand*. Bangkok: Saha Karn Bhaet.
- McGowan, P. J. K., Duckworth, J. W., Wen Xianji, van Balen, B., Yang Xiaojun, Khan, M. K. M., Yatim, S. H., Thanga, L., Setiawan, I. and Kaul, R. (1998) A review of the status of the Green Peafowl *Pavo muticus* and recommendations for future action. *Bird. Conserv. Internat.* 8: 331–348.
- d'Orleans, H.-P. (1894) *Autour du Tonkin*. Appendice: collections d'histoire naturelle: oiseaux (pp. 622–630). Paris: Calmann Levy.
- Oustalet, E. (1898) Catalogue des oiseaux recueillis par M. le Comte de Barthélemy dans le cours de son dernier voyage en Indochine. *Bull. Mus. Hist. Nat. Paris* 4: 11–19.
- Oustalet, E. (1899–1903) Les oiseaux du Cambodge, du Laos, de l'Annam et du Tonkin. *Nouv. Arch. Mus. Hist. Nat. Paris* (4)1: 221–296; (4)5: 1–94.
- Pain, D. J., Cunningham, A. A., Donald, P., Duckworth, J. W., Houston, A. A., Katzner, T., Parry-Jones, J., Poole, C., Prakash, V., Round, P. and Timmins, R. (2003) Causes and effects of temporospatial declines of *Gyps* vultures in Asia. *Conserv. Biol.* 17: 661–671.
- Parr, J. and Parr, M. (1998) Cooperative management of a wetland in central Lao P.D.R.–Nong Bo. *Tigerpaper* 25(4): 5–8.
- Perennou, C., Rose, P. M. and Poole, C. (1990) *Asian waterfowl census 1990. Mid-winter waterfowl counts in southern and eastern Asia, January 1990*. Slimbridge, U.K.: IWRB.
- Poole, C. M., Duckworth, J. W., Timmins, R. J. and van Zalinge, N. (in prep.) Bird observations from the Mekong and major tributaries in north-east Cambodia, 1998–2000.
- Poulsen, M. K. (in prep.) Ornithological records from Laos during December 1999–December 2001, with special attention to the Xe Pian NBCA.
- Robinson, H. C. and Kloss, C. B. (1931) Some birds from Siam and Laos (Middle Mekong). *Ibis* (13)1: 319–341.
- Robson, C. (2000) *A field guide to the birds of South-East Asia*. London: New Holland.
- Round, P. D. (1998) *Wildlife, habitats and priorities for conservation in Dong Khanthung proposed National Biodiversity Conservation Area, Champasak province, Lao PDR*. Vientiane: WCS/CPAWM.
- Round P. (2002) A bright green, poisoned landscape. *Bird Conserv. Soc. Thailand Bull.* 19 (5): 13–16.
- Salter, R. E. (1993) *Wildlife in Lao PDR. A status report*. Vientiane: IUCN.
- Stusak, J. M. and Vo Quy (1986) *The birds of the Hanoi area*. Prague: University of Agriculture.
- Thewlis, R. M., Duckworth, J. W., Anderson, G. Q. A., Dvorak, M., Evans, T. D., Nemeth, E., Timmins, R. J. and Wilkinson, R. J. (1996) Ornithological records for Laos, 1992–1993. *Forktail* 11: 47–100.
- Thewlis, R. M., Duckworth, J. W., Evans, T. D. and Timmins, R. J. (1998) The conservation status of birds in Laos: a review of key species. *Bird Conserv. Internat.* 8 (Suppl.) 1–159.
- Thomas, W. W. and Poole, C. M. (2003, this issue) An annotated list of the birds of Cambodia from 1859 to 1970. *Forktail* 19: 103–127.
- Timmins, R. J. and Men Soriyun (1998) *A wildlife survey of the Tonle San and Tonle Srepok river basins in northeastern Cambodia*. Hanoi and Phnom Penh: Fauna and Flora International and Wildlife Protection Office.
- Treesucon, U. and Round, P. D. (1990) Report on threatened birds in Thailand. *Tigerpaper* 17(3): 1–9.
- Vidal, J. (1960) La végétation du Laos: 2me partie: groupements végétaux et flore. *Travaux du Laboratoire Forestier de Toulouse* Tome v, 1re sect., vol I, art III.
- Wells, D. R. (1999) *The birds of the Thai-Malay Peninsula vol. 1. Non-passerines*. London: Academic Press.

APPENDIX

Site-by-site compilation of all species recorded

Species	Threat		1960s		Vte	1980s		1990s comparison	
	Lao	Global	Other	Vte		Wat Nak	Other sites	Vientiane	Sangthong
JAPANESE QUAIL <i>Coturnix japonica</i>	LKL				2			V9	
BLUE-BREASTED QUAIL <i>C. chinensis</i>	LKL				2			V9	
RED JUNGLEFOWL <i>Gallus gallus</i>				P					S6
SILVER PHEASANT <i>Lophura nycthemera</i>			L	P					
GREEN PEAFOWL <i>Pavo muticus</i>	ARL	GT:VU	H	see text					
LESSER WHISTLING-DUCK <i>Dendrocygna javanica</i>					6		D	V2,5,T2,9G2	S6
[COTTON PYGMY-GOOSE <i>Nettapus coromandelianus</i>]	ARL				{1}†				
GARGANEY <i>Anas querquedula</i>					2			V(PD), T (TE)	
DUCK sp. Anseriformes (1)					1†				
YELLOW-LEGGED BUTTONQUAIL <i>Turnix tanki</i>				P				V9	
BARRED BUTTONQUAIL <i>T. suscitator</i>					1†			V(PD)	
[BUTTONQUAIL <i>Turnix</i> sp.] (1)					{1}†			V2,9,H2	
GREY-CAPPED PYGMY WOODPECKER <i>Dendrocopos canicapillus</i>				I					
BLACK-HEADED WOODPECKER <i>Picus erythropygius</i>				P					
WOODPECKER sp. Picidae (1)					{2}†		V		
LINEATED BARBET <i>Megalaima lineata</i>				P†			O		S6
[GREEN-EARED BARBET <i>M. faiostricta</i>]					{1}†				S6
COPPERSMITH BARBET <i>M. haemacephala</i>			L,S,X	P	5		E	V2,H2	S6
BARBET <i>Megalaima</i> sp. (1)					7 {3}†		O,V		
WREATHED HORNBILL <i>Aceros undulatus</i>	ARL				see text				
GREAT HORNBILL <i>Buceros bicornis</i>	ARL	GNT	H						
COMMON HOOPOE <i>Upupa epops</i>	2002		S					T9	
INDIAN ROLLER <i>Coracias benghalensis</i>			J	P	7			V5,H2,G2	S6
COMMON KINGFISHER <i>Alcedo atthis</i>				P	17 {1}			V2,5,9,H2,G2,T9	S6
WHITE-THROATED KINGFISHER <i>Halcyon smyrnensis</i>				P	7			H2,G2	S6
BLACK-CAPPED KINGFISHER <i>H. pileata</i>					5			V2,9,G2,T9	S6
[CRESTED KINGFISHER <i>Megaceryle lugubris</i>]							{O}		
PIED KINGFISHER <i>Ceryle rudis</i>	ARL			P					
KINGFISHER sp. Alcedinidae etc. (1)					2				
GREEN BEE-EATER <i>Merops orientalis</i>					1 *a				S6
CHESTNUT-HEADED BEE-EATER <i>M. leschenaulti</i>					1			[H2]	
LARGE HAWK CUCKOO <i>Hierococcyx sparverioides</i>					1			H2	S6
INDIAN CUCKOO <i>Cuculus micropterus</i>					1			H2	
[BANDED BAY CUCKOO <i>Cacomantis sonnerati</i>]					{1}†				[S6]
PLAINTIVE CUCKOO <i>C. merulinus</i>				P	68 {2}	N		V2,5,9,H2,T9	S6
ASIAN KOEL <i>Eudynamys scolopacea</i>	2002				3			V2	
CUCKOO sp. Cuculidae (1)					6†				
GREATER COUCAL <i>Centropus sinensis</i>			L	P	9 {2}			V2,5,[9],H2,5,T9	S6
LESSER COUCAL <i>C. bengalensis</i>			H	P	13			V2,5,9,H2,5,T9	S6
VERNAL HANGING PARROT <i>Loriculus vernalis</i>				P	7 {1}	N		H2	S6
ALEXANDRINE PARAKEET <i>Psittacula eupatria</i>	ARL				see text				
GREY-HEADED PARAKEET <i>Psittacula finschii</i>					see text				
BLOSSOM-HEADED PARAKEET <i>P. roseata</i>	PARL				see text	see text			
RED-BREASTED PARAKEET <i>P. alexandri</i>				P	2	N			S6
PARAKEET <i>Psittacula</i> sp. (1)					1†		V		
SILVER-BACKED NEEDLETAIL <i>Hirundapus cochinchinensis</i>					9	N		H5	S6
BROWN-BACKED NEEDLETAIL <i>H. giganteus</i>					12 {2}	N	O	H2	S6,9
NEEDLETAIL <i>Hirundapus</i> sp. (1)			N	P	7 {2}†				

Species	Threat		1960s		Vte	1980s		1990s comparison	
	Lao	Global	Other	Vte		Wat Nak	Other sites	Vientiane	Sangthong
ASIAN PALM SWIFT <i>Cypsiurus balasiensis</i>			L,X	P	130	N	D,E,L, M,O,T,X	V2,5,9,H2, T2,9,G2	S6
FORK-TAILED SWIFT <i>Apus pacificus</i>			L		3		T,V	V5,H2	S6
HOUSE SWIFT <i>A. affinis</i>					2 {2}		M,X	V2,5,H2	S6
SWIFT sp. Apodidae (1)					1†				
CRESTED TREESWIFT <i>Hemiprocne coronata</i>				P	1				S6
BARN OWL <i>Tyto alba</i>	LKL			P	1			[V9]	
COLLARED SCOPS OWL <i>Otus bakkamoena</i>							P		S6
ASIAN BARRED OWLET <i>Glaucidium cuculoides</i>					10 {2}			H2,5,T9	S6
OWL sp. Strigiformes (1)					1 {2}†	N			
[LARGE-TAILED NIGHTJAR <i>Caprimulgus macrurus</i>]									[S6]
SPOTTED DOVE <i>Streptopelia chinensis</i>					1		X	H2	S6
RED COLLARED DOVE <i>S. tranquebarica</i>	2002			P					
PIGEON / DOVE sp. Columbidae (1)					5 {1}†				
EMERALD DOVE <i>Chalcophaps indica</i>				P	{1}				S6
THICK-BILLED GREEN PIGEON <i>Treron curvirostra</i>				P	mkt				S6
GREEN PIGEON <i>Treron</i> sp. (1)					3	N	{V}		
GREEN IMPERIAL PIGEON <i>Ducula aenea</i>	ARL			P	see text				
WHITE-BREASTED WATERHEN <i>Amaurornis phoenicurus</i>					3		L		S6
[RUDDY-BREASTED CRAKE <i>Porzana fusca</i>]					[4†] *b			T (TE)	
SMALL RAIL sp. Rallidae (1)					1†				
WATERCOCK <i>Gallinix cinerea</i>	ARL				11 {1}			T (TE)	
COMMON MOORHEN <i>Gallinula chloropus</i>					1			T (TE)	S6
EURASIAN WOODCOCK <i>Scolopax rusticola</i>					mkt			V2,H2	
PINTAIL SNIPE <i>Gallinago stenura</i>				P	27 {2} *c		X *c	G2,T9	
COMMON SNIPE <i>G. gallinago</i>				P	23			V5,9,G2,T9	
SNIPE <i>Gallinago</i> sp. (1)					19†				
EURASIAN CURLEW <i>Numenius arquata</i>				Pl					
MARSH SANDPIPER <i>Tringa stagnatilis</i>							X	T9	
COMMON GREENSHANK <i>T. nebularia</i>				P	15			V2,5,9,T9	
GREEN SANDPIPER <i>T. ochropus</i>			L	P	1 {1}			V9,T9	S6
WOOD SANDPIPER <i>T. glareola</i>					34		T	V2,5,9,T9	
COMMON SANDPIPER <i>Actitis hypoleucos</i>			L	P	6			V2,5,9,G2,T9	S6,9
SANDPIPER sp. Tringinae (1)					1 {1}†				
TEMMINCK'S STINT <i>Calidris temminckii</i>				Pl	10			V2,5,9,T9	
STINT <i>Calidris</i> sp. (1)					1†				
GREATER PAINTED-SNIPE <i>Rostratula benghalensis</i>	2002			P	7				
[PHEASANT-TAILED JACANA <i>Hydrophasianus chirurgus</i>]								T (TE)	
GREAT THICK-KNEE <i>Esacus recurvirostris</i>	ARL		C						S9
BLACK-WINGED STILT <i>Himantopus himantopus</i>					3			V5,T2,9	
LITTLE RINGED PLOVER <i>Charadrius dubius</i>			X	P	24			V2,5,9,T9	S6
KENTISH PLOVER <i>C. alexandrinus</i>				Pl	13		X	V2,5,9,T9	
LESSER SAND PLOVER <i>C. mongolus</i>					see text			[V2?,T9?]	
PLOVER sp. Charadriinae (1)					2†				
RIVER LAPWING <i>Vanellus duvaucelii</i>	ARL		L	P					S6,9
GREY-HEADED LAPWING <i>V. cinereus</i>	PARL			P	2			T2,G2	
[RED-WATTLED LAPWING <i>V. indicus</i>]	2002								
ORIENTAL PRATINCOLE <i>Glareola maldivarum</i>					8			V2,9	
SMALL PRATINCOLE <i>G. lactea</i>	PARL		L	P	1†			V2,5,9,T9	S6
PRATINCOLE <i>Glareola</i> sp. (1)					1†				
BROWN-HEADED GULL <i>Larus brunnicephalus</i>				P				T9	
RIVER TERN <i>Sterna aurantia</i>	ARL		C	P					

Species	Threat		1960s		Vte	1980s Wat Nak	Other sites	1990s comparison	
	Lao	Global	Other	Vte				Vientiane	Sangthong
BLACK-BELLIED TERN <i>S. acuticauda</i>	ARL	GNT		P					
OSPREY <i>Pandion haliaetus</i>				I					
BLACK BAZA <i>Aviceda leuphotes</i>					1 {1}†			H2	S6
ORIENTAL HONEY-BUZZARD <i>Pernis ptilorhynchus</i>					2			H2	S6
BLACK-SHOULDERED KITE <i>Elanus caeruleus</i>					19	N		T5,9	S6
BLACK KITE <i>Milvus migrans</i>	ARL		X	P	1			V9,H2	
BRAHMINY KITE <i>Haliastur indus</i>	ARL			P					
WHITE-RUMPED/LONG-BILLED VULTURE <i>Gyps bengalensis/G. indicus</i>	ARL	GT:CR	X	P *d					
RED-HEADED VULTURE <i>Sarcogyps calvus</i>	ARL	GNT	X	P					
CRESTED SERPENT EAGLE <i>Spilornis cheela</i>			H,L	P			M	H2	S6
EURASIAN MARSH HARRIER <i>Circus aeruginosus</i>				P	9			V9,T9	
HEN HARRIER <i>C. cyaneus</i>				P	3				
PIED HARRIER <i>C. melanoleucos</i>				P	2			V2,[H2],G2	
HARRIER <i>Circus</i> sp. (1)					1†			T (TE)	
CRESTED GOSHAWK <i>Accipiter trivirgatus</i>					1 {1}		M	H2	
SHIKRA <i>A. badius</i>				P	18	N		H2,G2	S6
JAPANESE SPARROWHAWK <i>A. gularis</i>					1 *e			[V5]	
ACCIPITER <i>Accipiter</i> sp. (1)					3 {2}†			V9?,T9?	
GREY-FACED BUZZARD <i>Butastur indicus</i>					1	N		H2,T9	
GREATER SPOTTED EAGLE <i>Aquila clanga</i>	LKL	GT:VU		P	{2}†				
LARGE RAPTOR sp. Accipitrinae (1)					1†				
COMMON KESTREL <i>Falco tinnunculus</i>				P	5 {1}			V[2],9,[H2]	
[ORIENTAL HOBBY <i>F. severus</i>]					{1}†				
PEREGRINE FALCON <i>F. peregrinus</i>			S	P					
DARTER <i>Anhinga melanogaster</i>	ARL	GNT		P					
[LITTLE CORMORANT <i>Phalacrocorax niger</i>]	ARL			{1}	{1}†				
LITTLE EGRET <i>Egretta garzetta</i>			L	P	2 {2}†				
GREY HERON <i>Ardea cinerea</i>	PARL			P				V9,G2,T9	
PURPLE HERON <i>A. purpurea</i>	PARL			P	4			V2	
HERON sp. Ardeidae (1)					1†				
GREAT EGRET <i>Casmerodius albus</i>				P	2		O		
CATTLE EGRET <i>Bubulcus ibis</i>				P	8				
EGRET sp. Ardeidae (1)					3†		V		
POND HERON <i>Ardeola</i> sp.			C,L *f	I *f	23 *f			V9,H2,G2,T9	S6
BLACK-CROWNED NIGHT HERON <i>Nycticorax nycticorax</i>	PARL			P					
YELLOW BITTERN <i>Ixobrychus sinensis</i>				P	1			V (PD), T (TE)	
CINNAMON BITTERN <i>I. cinnamomeus</i>					14			V[2?],5, T (TE)	S6
SMALL BITTERN <i>Ixobrychus</i> sp. (1)					1				
[WOOLLY-NECKED STORK <i>Ciconia episcopus</i>]	ARL				{1}†				
STORK sp. Ciconiidae (1)	ARL			see text	1 {1}†		D		
[BANDED BROADBILL <i>Eurylaimus javanicus</i>]					{1}† *g				S6
ASIAN FAIRY BLUEBIRD <i>Irena puella</i>			L	P†			V		S6
GOLDEN-FRONTED LEAFBIRD <i>Chloropsis aurifrons</i>					5	N			
LEAFBIRD <i>Chloropsis</i> sp. (1)					1†				S6
BROWN SHRIKE <i>Lanius cristatus</i>			X	P	79 {1}	N	M,P,X	V2,5,9,H2,5,T9	S6
BURMESE SHRIKE <i>L. colluriooides</i>			H					V5	S6
[LONG-TAILED SHRIKE <i>L. schach</i>]							{X}	V2,5	
GREY-BACKED SHRIKE <i>L. tephronotus</i>			J				P		S6
SHRIKE <i>Lanius</i> sp. (1)					2†				
RUFIOUS TREEPIE <i>Dendrocitta vagabunda</i>					1 {1}				
LARGE-BILLED CROW <i>Corvus macrorhynchos</i>	2002		A,C,H,L,X	P	1 {1}	N	P	T9	S6
ASHY WOODSWALLOW <i>Artamus fuscus</i>				I	2 {1}		T		

Species	Threat		1960s			1980s		1990s comparison	
	Lao	Global	Other	Vte	Vte	Wat Nak	Other sites	Vientiane	Sangthong
BLACK-NAPED./ SLENDER-BILLED ORIOLE <i>Oriolus chinensis/O. tenuirostris</i>			A,X	P	1†			H2	S6
[MAROON ORIOLE <i>O. traillii</i>]					{1}†				S6
LARGE CUCKOOSHRIKE <i>Coracina macei</i>					1				
INDOCHINESE CUCKOOSHRIKE <i>C. polioptera</i>					2	N		[H2?]	
BLACK-WINGED CUCKOOSHRIKE <i>C. melaschistos</i>					2 {1}			H2	S6
CUCKOOSHRIKE <i>Coracina</i> sp. (1)					1†				
ROSY/SWINHOE'S MINIVET <i>Pericrocotus roseus/P. cantonensis</i>					1			[V9?],H2	S6
ASHY MINIVET <i>P. divaricatus</i>					1†			[V9?],H2	
SCARLET MINIVET <i>P. flammeus</i>					1†				S6
MINIVET <i>Pericrocotus</i> sp. (1)					6 {1}†		P		
BLACK DRONGO <i>Dicrurus macrocerus</i>				P	39	N	M,{X}	V2,5,9,H2,T9	S6
ASHY DRONGO <i>D. leucophaeus</i>				P	13 {1}		M	V2,H2,5	S6,9
BRONZED DRONGO <i>D. aeneus</i>				P	1 {2}†			H2	S6
LESSER RACKET-TAILED DRONGO <i>D. remifer</i>					1			H2	S6
SPANGLED DRONGO <i>D. hottentottus</i>			L		9 {2}	N		V9,H2,5	S6
[DRONGO <i>Dicrurus</i> sp.]					{1}†				
BLACK-NAPED MONARCH <i>Hypothymis azurea</i>				P	3 {1}†			V9,H2,5	S6
ASIAN PARADISE-FLYCATCHER <i>Terpsiphone paradisi</i>				P	2			V9,H2	S6
COMMON IORA <i>Aegithina tiphia</i>				P†	1 {4}			H2,5	S6
LARGE WOODSHRIKE <i>Tephrodornis gularis</i>					1 {1}				S6
COMMON WOODSHRIKE <i>T. pondicerianus</i>					1 {1}				
BLUE ROCK THRUSH <i>Monticola solitarius</i>			N	P	10	N	M,T	V2,H2,T9	S6
BLUE WHISTLING THRUSH <i>Myophonus caeruleus</i>							M		S6
THRUSH <i>Turdus</i> sp.					1†				
DARK-SIDED FLYCATCHER <i>Muscicapa sibirica</i>			S						
ASIAN BROWN FLYCATCHER <i>M. dauurica</i>				Pl	10 {1}	N		V2,5,H2	
YELLOW-RUMPED FLYCATCHER <i>Ficedula zanthopygia</i>					4			V2,H2	
MUGIMAKI FLYCATCHER <i>F. mugimaki</i>					1 {1}				
RED-THROATED FLYCATCHER <i>F. parva</i>			S	P	51	N		V2,5,9,H2,5,G2,T9	S6
LITTLE PIED FLYCATCHER <i>F. westermanni</i>					10	N		H2	S6
VERDITER FLYCATCHER <i>Eumyias thalassina</i>					1†			V9,H2	S6
HAINAN BLUE FLYCATCHER <i>Cyornis hainanus</i>					2			H2	S6
GREY-HEADED CANARY FLYCATCHER <i>Culicicapa ceylonensis</i>				P	9 {2}	N	E	V2,5,9,H2,5	S6
FLYCATCHER sp. <i>Muscicapini</i> (1)					20†	N			
SIBERIAN RUBYTHROAT <i>Luscinia calliope</i>					1			V2,5,H2	S6
BLUETHROAT <i>L. svecica</i>					19 {1}			V2,5,T9	
ORIENTAL MAGPIE ROBIN <i>Copsychus saularis</i>				P	24 {1}	N		V2,5,9,H2,G2,T9	S6
WHITE-RUMPED SHAMA <i>C. malabaricus</i>							O		S6
COMMON STONECHAT <i>Saxicola torquata</i>			J,X	P	64		E,M	V2,5,9,H2,G2,T9	S6
PIED BUSHCHAT <i>S. caprata</i>			S,X	P			M,{P}		S6
GREY BUSHCHAT <i>S. ferrea</i>					28 {2} *h			H2	S6
CHESTNUT-TAILED STARLING <i>Sturnus malabaricus</i>					20	N		V5,H2	
WHITE-SHOULDERED STARLING <i>S. sinensis</i>					3	N			
BLACK-COLLARED STARLING <i>S. nigricollis</i>	2002		A,L,S	P	2†				
VINOUS-BREASTED STARLING <i>S. burmannicus</i>					1†				
STARLING <i>Sturnus</i> sp. (1)					5†				
COMMON MYNA <i>Acridotheres tristis</i>	2002		X	P	35 {2}	N		V2,5,9,T9	
WHITE-VENTED MYNA <i>A. cinereus</i>	2002		S,X *j	P *j	1 *j		X *j	T2	
HILL MYNA <i>Gracula religiosa</i>				P			V		S6
MYNA sp. <i>Acridotheres / Ampeliceps / Gracula</i> (1)					1 {1}†				
SAND/PALE MARTIN <i>Riparia riparia / R. diluta</i>					6 {1}			V2,9,T9	
PLAIN MARTIN <i>R. paludicola</i>	ARL				1			T9	S6

Species	Threat		1960s		Vte	1980s		1990s comparison	
	Lao	Global	Other	Vte		Wat Nak	Other sites	Vientiane	Sangthong
MARTIN <i>Riparia</i> sp. (1)					1 {1}†				
DUSKY CRAG MARTIN <i>Hirundo concolor</i>			L				O		
BARN SWALLOW <i>H. rustica</i>			J,L,N,X	P	93	N	L,P,T,X	V2,5,9,H2,5,G2,T9	S6,9
WIRE-TAILED SWALLOW <i>H. smithii</i>	PARL		L	P	1 {1}†				S6,9
RED-RUMPED / STRIATED SWALLOW <i>H. daurica/H. striolata</i>			H,S		7			V9,H2,G2,T9	S6,9
SWALLOW <i>Hirundo</i> sp. (1)					1 {1}†				
NORTHERN/ASIAN HOUSE MARTIN <i>Delichon urbica/D. dasypus</i>			N	P	3			H2	S6
BLACK-HEADED BULBUL <i>Pycnonotus atriceps</i>				P	5 {1}			H2	S6
BLACK-CRESTED BULBUL <i>P. melanicterus</i>			L,S	P	3			H2	S6
RED-WHISKERED BULBUL <i>P. jocosus</i>			A,H,S	P	128	N	E,T	V2,5,9,T9	S6
SOOTY-HEADED BULBUL <i>P. aurigaster</i>				P			L,O		
STRIPE-THROATED BULBUL <i>P. finlaysoni</i>				P	3 {1}			H2	S6
STREAK-EARED BULBUL <i>P. blanfordi</i>				P	8	N		H2	S6
PUFF-THROATED BULBUL <i>Alophoixus pallidus</i>				P *k	2 *k	N *k			S6
BLACK BULBUL <i>Hypsipetes leucocephalus</i>					2				S6
BULBUL sp. Pycnonotidae (1)					3†		M,O		
ZITTING CISTICOLA <i>Cisticola juncidis</i>					55 {1}			V2,H5,T9	
BRIGHT-HEADED CISTICOLA <i>C. exilis</i>					{5}†			V2,5,9,T9	S6
[BROWN PRINIA <i>Prinia polychroa</i>]					[1]†				
RUFESCENT PRINIA <i>P. rufescens</i>					44 {5}			H2, T (TE)	S6
GREY-BREASTED PRINIA <i>P. hodgsonii</i>					47 {1}		L,P	V2,5,9,T9	S6
YELLOW-BELLIED PRINIA <i>P. flaviventris</i>					5†			V2,5,9,T9	S6
PLAIN PRINIA <i>P. inornata</i>			L	P	17 {3}		L	V2,5,9,T9	S6
PRINIA <i>Prinia</i> sp. (1)					10†				
CHESTNUT-FLANKED WHITE-EYE <i>Zosterops erythropleurus</i>					1†				
[ORIENTAL WHITE-EYE <i>Z. palpebrosus</i>]				P	[1]† *1			[V5]	
[JAPANESE WHITE-EYE <i>Z. japonicus</i>]					[1]† *1				
WHITE-EYE <i>Zosterops</i> sp. (1)					37	N	E	V2,9,H2,T9	S6
[BUSH WARBLER <i>Cettia</i> sp.]					[{1}†]			H2,T9	S6
GRASSHOPPER WARBLER <i>Locustella</i> sp.					1†			H2,T9	S6
BLACK-BROWED REED WARBLER <i>Acrocephalus bistrigiceps</i>					8†			V2,9,T9	
[PADDYFIELD WARBLER / BLUNT-WINGED WARBLER <i>A. agricola / A. concinens</i>]	LKL/0				[{2}†]			V5	
ORIENTAL / CLAMOROUS REED WARBLER <i>A. orientalis / A. stentoreus</i>				Pl	6 {2}			V2,9,T9	
THICK-BILLED WARBLER <i>A. aedon</i>					1†			V2,9,H2,G2,T9	S6
REED WARBLER <i>Acrocephalus</i> sp. (1)					6†				
COMMON TAILORBIRD <i>Orthotomus sutorius</i>			L,S	P	126	N	E,L,{M},O	V2,5,9,H2,T9	S6,9
DARK-NECKED TAILORBIRD <i>O. atrogularis</i>					8 {3}†			H2	S6
DUSKY WARBLER <i>Phylloscopus fuscatus</i>					4 {1}	N		V2,5,9,H2,5,G2,T9	S6
RADDE'S WARBLER <i>P. schwarzi</i>					3†			V2,5,9,H2,5,T9	S6
YELLOW-BROWED WARBLER <i>P. inornatus</i>					1†			V2,5,9,H2,5,G2,T9	S6
ARCTIC WARBLER <i>P. borealis</i>					17 {1}	N		H2	
[GREENISH WARBLER <i>P. trochiloides</i>]					[{1}†]			H2,5	S6
EASTERN CROWNED WARBLER <i>P. coronatus</i>					5†	N		H2	
[BLYTH'S LEAF WARBLER <i>P. reguloides</i>]					[{1}†]			H2	S6
LEAF WARBLER <i>Phylloscopus</i> sp. (1)					25 {2}†		P		S6
WARBLER sp. Sylviidae (1)					8 {1}†				
LAUGHINGTHRUSH <i>Garrulax</i> sp.					6 {2}†				S6
BUFF-BREASTED BABBLER <i>Pelloroneum tickelli</i>					22 {3}	N		H2	S6
STRIPED TIT BABBLER <i>Macronous gularis</i>					4†			H2,5	S6,9
[BROWN-CHEEKED FULVETTA <i>Alcippe poioicephala</i>]					[{4}†] *m				S6
BABBLER sp. Garrulacinae / Timaliini (1)					17† *n		O		S6

Species	Threat		1960s			1980s		1990s comparison	
	Lao	Global	Other	Vte	Vte	Wat Nak	Other sites	Vientiane	Sangthong
AUSTRALASIAN BUSHLARK <i>Mirafra javanica</i>					1†				
INDOCHINESE BUSHLARK <i>M. marionae</i> *o			A,H	P	16		L,O,X	T (TE)	
LARK <i>Mirafra</i> / <i>Alauda</i> sp. (1)					1 {1}†		P		
THICK-BILLED FLOWERPECKER <i>Dicaeum agile</i>					4 {1}			H2	S6
PLAIN FLOWERPECKER <i>D. concolor</i>					37 *p	N		H2	S6
SCARLET-BACKED FLOWERPECKER <i>D. cruentatum</i>			S	P	36 {1}	N		V5,H2,5,T9	S6
FLOWERPECKER <i>Dicaeum</i> spp. (1)					11 {1}†				S6
BROWN-THROATED SUNBIRD <i>Anthreptes malacensis</i>					11 {3}	N		V2,5	
RUBY-CHEEKED SUNBIRD <i>A. singalensis</i>					5	N		H2	S6
[PURPLE-THROATED SUNBIRD <i>Nectarinia sperata</i>]					[1†]				
OLIVE-BACKED SUNBIRD <i>N. jugularis</i>				P	58	N		T9,H2,5	S6
[CRIMSON SUNBIRD <i>Aethopyga siparaja</i>]					[{1}†]			H2	S6
SUNBIRD sp. Nectariniini (1)					23†	N			
PLAIN-BACKED SPARROW <i>Passer flaveolus</i>				P†	92	N		V5	
EURASIAN TREE SPARROW <i>P. montanus</i>			A,H,L,N,S,X,ZP		132	N	D,E,L,M, O,P,T,X	V2,5,9,H2,T9	S6
FOREST WAGTAIL <i>Dendronanthus indicus</i>					1				
WHITE WAGTAIL <i>Motacilla alba</i>			H,N *q	P	58	N	E,M,T	V2,5,9,H2,G2,T9	S6,9
CITRINE WAGTAIL <i>M. citreola</i>					25			V2,5,9,T9	
YELLOW WAGTAIL <i>M. flava</i>			N	P	51		E	V2,5,9,T9	S9
GREY WAGTAIL <i>M. cinerea</i>				P	30		P	V5,H2	S6
WAGTAIL sp. <i>Dendronanthus</i> / <i>Motacilla</i> (1)					1†				
RICHARD'S/ PADDYFIELD PIPIT <i>Anthus richardi</i> / <i>A. rufulus</i>			A,{J},X	P	47		P	V2,5,9,H2,5,G2,T9	S6
OLIVE-BACKED PIPIT <i>A. hodgsoni</i>				P	44	N		V2,5,9,H2,5,G2	S6
RED-THROATED PIPIT <i>A. cervinus</i>					29			V2,5,9,T9	
PIPIT <i>Anthus</i> sp. (1)					9†				
BAYA WEAVER <i>Ploceus philippinus</i>	PARL		Z	P	1				
WHITE-RUMPED MUNIA <i>Lonchura striata</i>				P	21	N	L,O	V2,5,9,H2	S6
SCALY-BREASTED MUNIA <i>L. punctulata</i>				P†	90	N	M,X	V2,5,9,H2,G2,T9	S6
[BLACK-HEADED MUNIA <i>L. malacca</i>]	LKL				[{1}†]				
MUNIA <i>Lonchura</i> sp. (1)					1†				
[CRESTED BUNTING <i>Melophus lathamii</i>]					[1]				
CHESTNUT-EARED BUNTING <i>Emberiza fucata</i>					3				
[LITTLE BUNTING <i>E. pusilla</i>]					[{1}†]				
YELLOW-BREASTED BUNTING <i>E. aureola</i>				P	20 {1}			T9	
CHESTNUT BUNTING <i>E. rutila</i>					1†				S6
BLACK-FACED BUNTING <i>E. spodocephala</i>					2				
BUNTING sp. <i>Emberizinae</i> (1)					1				

Key

Threat codes (Lao): ARL = At Risk in Laos; PARL = Potentially At Risk in Laos; LKL = Little Known in Laos (following Duckworth *et al.* 1999); 2002 = identified in Duckworth *et al.* (2002) as having shown decline across at least part of Laos. Threat codes (Global): GT:CR = Globally Threatened: Critical; GT:VU = Globally Threatened: Vulnerable; GNT = Globally Near Threatened (following BirdLife International 2001).

Identifications are as presented by WWT, with amendment for changes in systematics and nomenclature. Identifications given by WWT as provisional are between {braces}. Identifications assessed in 2002 as provisional are within [square brackets]. The following species are also mentioned, mostly provisionally, in the written materials, but are not included in the table because their occurrence is well outside expected patterns and/or the notes taken do not support the provisional identification: Black-browed Barbet *Megalaima oorti*; Banded Kingfisher *Lacedo pulchella*; Rose-ringed Parakeet *Psittacula krameri*; Pink-necked Green Pigeon *Treron vernans*; Swinhoe's Snipe *Gallinago megala*; Jack Snipe *Lymnocyptes minimus*; Besra *Accipiter virgatus*; Von Schrenck's Bittern *Ixobrychus eurhythmus*; Tiger Shrike *Lanius tigrinus*; Lesser Shortwing *Brachypteryx leucophrys*; Pale Blue Flycatcher *Cyornis unicolor*; Blue-fronted Redstart *Phoenicurus frontalis*; Flavescent Bulbul *Pycnonotus flavescens*; Pallas's / Chinese Leaf Warbler *Phylloscopus proregulus* / *P. sichuanensis*; Rufous-winged Fulvetta *Alcippe castaneiceps*; Black-headed Sibia *Heterophasia melanoleuca*; Fire-breasted Flowerpecker *Dicaeum ignipectus*; Green-tailed Sunbird *Aethopyga nipalensis*; Tristram's Bunting *Emberiza tristrami*.

Site column notes:

1960s other: Presence is indicated by code letter for site, as follows: A = Attapu; C = Champasak; H = Houay Khong; J = Plain of Jars; L = Louangphabang and Pak Ou; N = Paksong; S = Saravan; X = Pakxe; Z = Ban Houayxai. All records come from the notebook; there are no inconsistencies with other sources.

1960s Vte = 1960s Vientiane. Presence indicated by: P = listed in the notebook's 'list of the birds of Vientiane...' and in the index cards; P† = listed in the notebook but not the index cards (many of these differences are because very few '?' records of the notebook were included on the index cards); Pl = listed in the notebook individual day entries, but not on the 'list'; I = listed on the index cards but not in the notebook; mkt = market specimen(s) only.

1980s Vte = 1980s Vientiane. Number indicates number of notebook lists (for period of 1 day up to 1 week, exceptionally more) on which the species occurs, provisional records are between {braces}. † = not recorded on the index cards. mkt = recorded only in market

1980s Wat Nak = 1980s Wat Nak garden, Vientiane. All records are in the notebook; there are no inconsistencies with other sources.

1980s other: Presence is indicated by code letter for site, as follows: D = Ban Thadua; E = Xieng Khuang; L = Louangphabang; M = Phou Hong, Nam Ngum Reservoir; O = Pak Ou; P = Ban Phonsavan; T = Thanaleng; V = Vangveun; X = Pakxe. All records come are in the notebook; there are no inconsistencies with other sources.

1990s comparison: Vientiane. V = central Vientiane; H = Houay Nhang; G = Ban Thangon; T = Ban Thadua; 2 = records 1992–1993 (Thewlis *et al.* 1996); 5 = records 1994–1995 (Duckworth *et al.* 1998); 9 = records 1998–2000 (Duckworth *et al.* 2002; for central Vientiane, details only records from Mekong channel); PD = unpublished Vientiane records of P. Davidson during 1997–2000 (*in litt.* 1999–2002); TE = unpublished Ban Thadua records of T. D. Evans during early 2000. Species are listed in this column only if they had also been recorded by WWT during the 1960s or 1980s. Thus, this column does not give complete lists of all birds recorded at these sites in the 1990s.

1990s comparison: Sangthong. S6 = recorded in 1996 (Duckworth 1996); S9 = recorded in 1999 (Duckworth *et al.* 2002). Species are listed in this column only if they had also been recorded by WWT during the 1960s or 1980s. Thus, this column does not give complete lists of all birds recorded at these sites in the 1990s.

Individual species notes:

(1) does not include individuals identified to species.

*a, identification of index cards; provisionally identified as Blue-throated Bee-eater *Merops viridis* in notebook.

*b, listed in the notebooks as possible calling Little Grebe *Tachybaptus ruficollis*, but habitat suggests the similar sounding crane (recorded in Vientiane plain wetlands near Ban Thadua by T. D. Evans [*in litt.* 2003; two on 8 March 2000] is more likely).

*c, most perhaps better regarded as Pintail / Swinhoe's Snipe, because these species are very difficult to separate; there are no certain records of the latter from Laos. At least one was examined in the hand and identified as Pintail Snipe.

*d, apparently same record listed as *Gyps indicus* on index cards.

*e, field identification of this species is very difficult, but this bird was examined in the hand.

*f, mostly listed (without caveat) as Chinese Pond Heron, but birds in non-breeding plumage (as dates indicate most of these would have been) are almost inseparable from Javan Pond Heron, which could conceivably occur, although there are as yet no Lao records.

*g, actually listed as Black-and-yellow Broadbill *Eurylaimus ochromalus*, a Sundaic species most unlikely to occur in Laos; presumably a writing error.

*h, including a small number written as Jerdon's Bushchat *Saxicola jerdoni*; several others were originally written thus and subsequently changed to Grey. Those not corrected are assumed to have been overlooked; Jerdon's Bushchat does not appear in the index cards.

*j, noted as the very similar Crested Myna *Sturnus cristatellus*, which occurs only very locally in Laos and has never been recorded from Vientiane.

*k, in notebooks as White-throated Bulbul *Alophoixus flaveolus* (never recorded from Laos), but on index cards re-identified as the much more likely Puff-throated Bulbul *Alophoixus pallidus*.

*l, field separation of these two species is very difficult and these records should be regarded as provisional.

*m, three originally listed as Grey-cheeked Fulvetta *Alcippe morrisonia*, but on grounds of habitat and range these would be much more likely to be the closely similar Brown-cheeked Fulvetta *Alcippe poiocephala*.

*n, many listed as '*Alcippe* sp.'.

*o, considered as part of Rufous-winged Bushlark *Mirafra assamica* by Inskipp *et al.* (1996).

*p, while this species doubtless occurred, the preponderance of records in the first half of the period, when there were few records of *Dicaeum cruentatum*, followed by a reversal of relative ratios of records of the two species, suggests that many of these birds may have been female *Dicaeum cruentatum*.

*q, recently described Mekong Wagtail *Motacilla samveasnae* Duckworth *et al.* (2001) not ruled out.

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