FORKTAIL 22 (2006): 71–76

Additional information on the autumn migration of raptors in east Bali, Indonesia

FRANCESCO GERMI and DONO WALUYO

Following a preliminary survey in autumn 2004, we carried out the first full-season raptor migration count for Indonesia in the Seraya Range, in eastern Bali, during September–November 2005. In 65 days, 91,232 raptors were observed migrating eastwards, indicating a large influx of raptors of eastern Palearctic origin into Wallacea, heretofore unreported. At least five species were involved: Oriental Honey-buzzard *Pernis ptilorhyncus*, Booted Eagle *Hieraaetus pennatus*, Chinese Sparrowhawk *Accipiter soloensis*, Japanese Sparrowhawk *A. gularis* and Peregrine Falcon *Falco peregrinus*. With 49,811 identified individuals, Chinese Sparrowhawk was the most common raptor on passage. Owing to the distance at which observations were made and plumage similarities, a significant proportion of sparrowhawks could not be identified to species level. Hunting and feeding during migration was observed in three species. We recorded evidence of illegal trade in migratory sparrowhawks at a local bird market.

INTRODUCTION

Approximately one million raptors migrate along the system of corridors known as the East Asian Flyway, which stretches from eastern Siberia to South-East Asia and the Indonesian Archipelago, mostly overland but including water crossings of up to 300 km (Lane and Parish 1991, Zalles and Bildstein 2000, Bildstein and Zalles 2005).

The first systematic data on raptor migration for Indonesia were collected only two decades ago by Ash (Ash 1984, 1993). Over a period of 32 consecutive days in October–November 1990, he observed over 11,000 migrating raptors passing through the bay of Teluk Terima, in west Bali. However, despite a number of subsequent surveys in Bali and Java (Mason 1994, Chong 2000, Nuraeni and Suparman 2000, Nijman 2001a,b, 2004a, Imansyah *et al.* 2002, Sukmantoro *et al.* 2005, B. van Balen *in litt.* 2005), a full-season count was never attempted before this study.

In October–November 2004, the eastern half of Bali was surveyed by one of us (FG), in order to locate migration routes and crossing points to the Lombok Strait, and to undertake the first count of raptors migrating from Bali to Wallacea. The Seraya Range was recognised as a migration bottleneck area and 8,430 raptors were counted during preliminary work, mainly in the second half of the season. This suggested that a substantial passage occurred over the full season (Germi 2005). In order to investigate further the numbers of diurnal raptors migrating through east Bali, we carried out a second survey in the Seraya Range during September–November 2005, covering most of the autumn migration season.

STUDY AREA

The Seraya Range is interposed between Mt Agung (3,148 m) and the Lombok Strait, at the eastern end of Bali's central mountain spine (Fig. 1; for a description of the study area, see Germi 2005). Prevailing winds in September–November are from the south-west, creating a favourable combination of ridge updrafts and partial tail-wind support for eastbound migrating raptors, which follow the island's mountain spine as a leading line.

Six watch sites were used in the study area: Mt Sega, Mt Bagas, Lempuyang, Tinjalas, Kusambi and Bugbug (Table 1). The first three sites, all on mountain ridges on the western side of the range, provided optimal views of

Table 1. Watch sites used in east Bali, September–November 2005.

Watch site	Coordinates	Altitude (m)	Description
Mt Sega	08°22′50″S 115°38′17″E	765	Ridge with road access, 360° view from Mt Agung to the south coast, and from the northern slopes of Seraya Range to Mt Kusambi and the Lombok Strait. Optimal lookout in moderate south-west winds or no wind. Highest passage recorded from this site.
Mt Bagas	08°22′20″S 115°38′30″E	847	Hill-top without road access. View of Mt Agung, north coast, northern slopes of Seraya Range and Lombok Strait. Suitable when no wind.
Lempuyang	08°23′30″S 115°38′12″E	690	Ridge with road access. View from westernmost slopes of Seraya Range to the south coast, Amlapura and Bugbug. Optimal lookout in strong south-west winds, when large flocks fly along the south coast to compensate for wind drift.
Tinjalas	08°24′48″S 115°41′18″E	330	Hill-top with nearby road access. Broad view of the Lombok Strait, several crossing points used in moderate south-west winds, and southern slopes of Seraya Range. Many flocks cross at high altitude and/or distantly further north-east.
Kusambi	08°23′36″S 115°42′34″E	72	Coastal lookout with road access. Easternmost point of Bali. Main crossing area, but most migrants cross at high altitude and are mostly undetectable. Nearby suitable hills lack road access.
Bugbug	08°29′40″S 115°35′14″E	114	Coastal hills with road access. Southernmost site, small passage noted in days of strong south-west winds. Longer crossing compared with Seraya, used mainly in conditions that require compensation for wind drift.

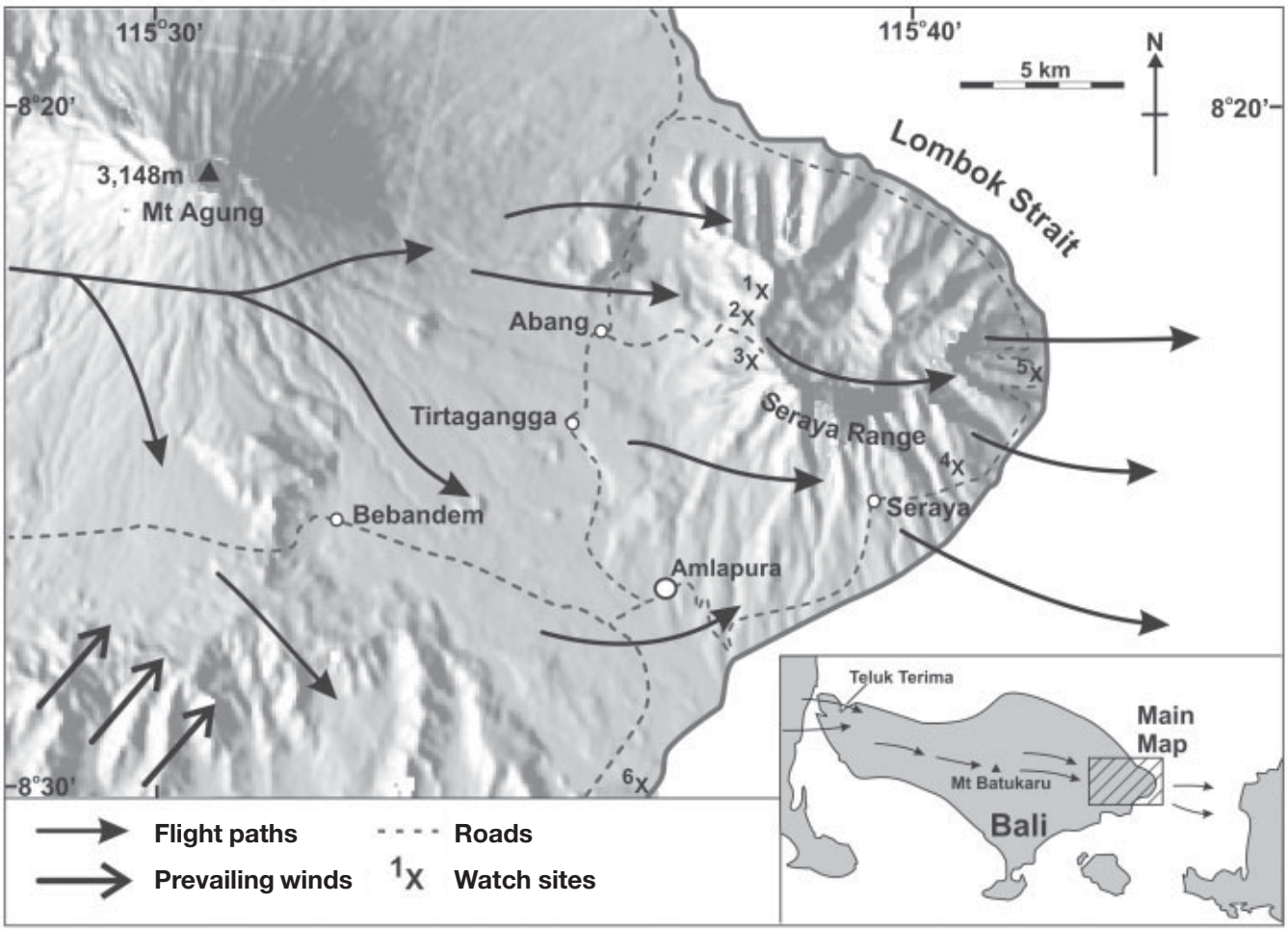

Figure 1. Map of the study area in east Bali, with location of the watch sites used in September–November 2005: (1) Mt Bagas; (2) Mt Sega; (3) Lempuyang; (4) Tinjalas; (5) Kusambi; (6) Bugbug.

the migration stream. From Mt Sega the view to the west extended 15 km, from the northern slopes of Mt Agung to the coast south of Amlapura, where most raptors converging towards the crossing points of the Lombok Strait passed. Looking east to the northern side of the range, the strait and the island of Lombok could be seen. Raptors crossing the strait were visible from the watch sites of Tinjalas, Kusambi and Bugbug. However, the height of migrants crossing the strait and the relatively low altitude of these locations always resulted in lower counts compared with the three previous sites.

METHODS

Fieldwork was conducted on 65 days during 4 September–30 November 2005. Reconnaissance visits were made in September, at the onset of the migration season, in order to determine the best watch sites. Once the passage started, counts were made mainly from 08h00 to 16h00 by a team of 1–4 observers from a single watch site each day, alternating the sites according to weather conditions, and totalling 476 hours of observation. Priority was given to the sites of Mt Sega, Mt Bagas and Lempuyang, which provided a wider view of the passage.

Locations and directions were determined using a GPS and compasses. Numbers were tallied using hand-held tally counters, and count data were recorded on standard forms provided by HMANA (Hawk Migration Association of North America), modified for local requirements.

The directions from which migrants were more likely to appear were constantly scanned with binoculars, and between these scans the area above and on each side of the observer were also checked. Single individuals or flocks were followed until identification and direction of travel were established. At ridge watch sites with combined views to the west and the east, raptors were recorded only from one side, generally from the arriving direction (west), in order to avoid double counting. The passing raptors were counted individually, but in instances of large flocks (>200 individuals), 'blocks' of ten birds were multiplied within the flock, or the migrants were counted individually as they streamed in lines out of thermals. Whenever possible, counts of large flocks were repeated several times (Fuller and Mosher 1981, Bildstein and Zalles 1995, Bibby *et al.* 2000).

Accipiters passing at more than 1 km distance from the observer were not recorded to the species level. Distant large migrating raptors were recorded as Oriental Honey-buzzards *Pernis ptilorhyncus*, owing to the fact that 99.9% of large identified raptors were of this species.

RESULTS

During September–November 2005, 91,232 raptors were observed migrating eastward across the Seraya Range (Fig.

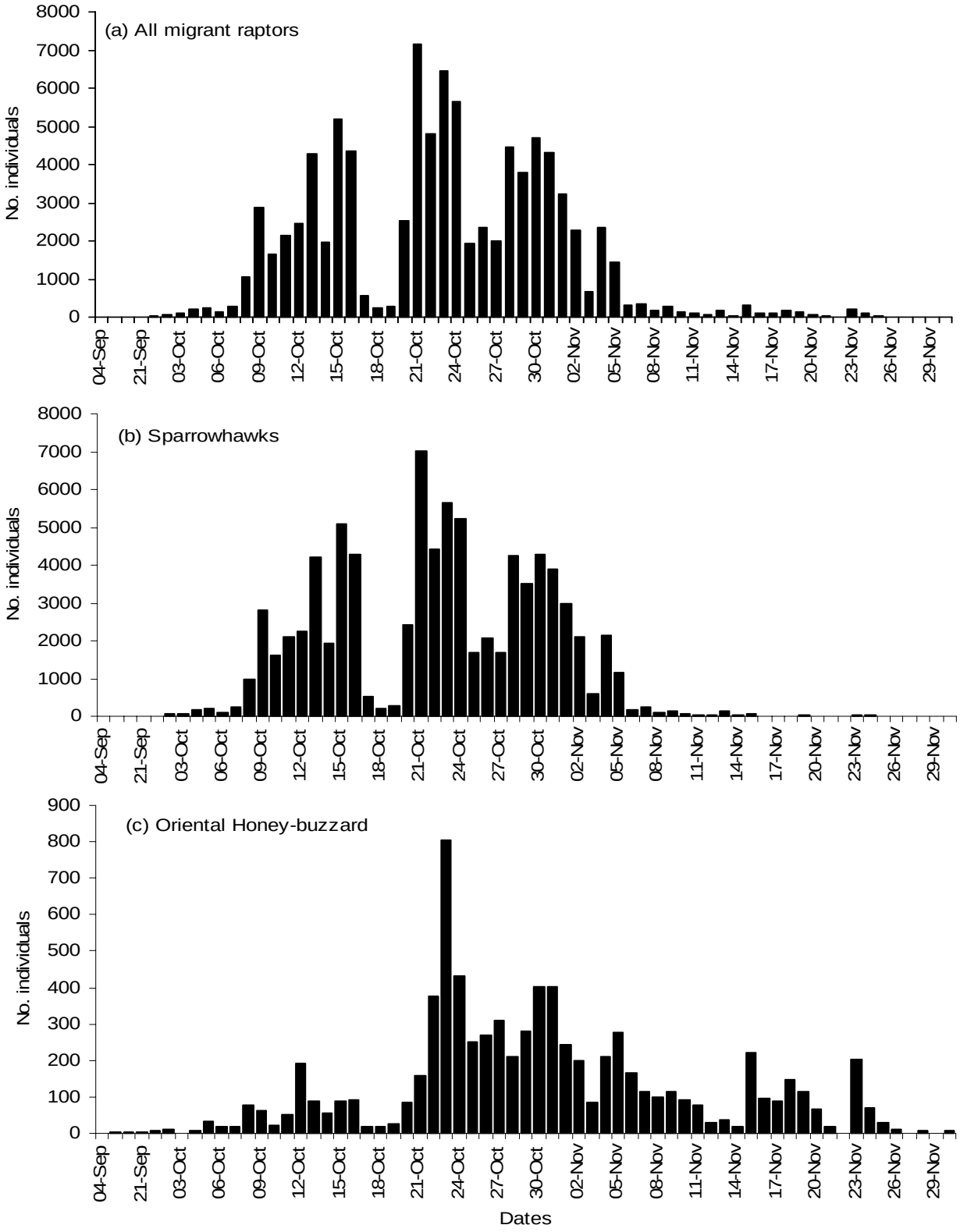

Figure 2. Daily totals of (a) all migrant raptors; (b) sparrowhawks (Chinese Sparrowhawk *Accipiter soloensis*, Japanese Sparrowhawk *A. gularis* and unidentified individuals of these two species); and (c) Oriental Honey-buzzard *Pernis ptilorhyncus* in east Bali, September–November 2005. Heavy rain occurred on 17–19 October.

Table 2. Period of passage of migrant raptors, peak days and percentage of birds passing on the peak day, east Bali, September–November 2005.

Species	Period of passage	Peak migration day	% on peak day	Total days observed
Chinese Sparrowhawk	21 Sept.–24 Nov.	21 Oct.	9	50
Japanese Sparrowhawk	21 Sept.–28 Nov.	30 Oct.	12	51
Oriental Honey-buzzard	11 Sept.–30 Nov.	23 Oct.	10	55

2). A total of 83,499 sparrowhawks formed the majority of the migrants, including 49,811 identified Chinese Sparrowhawks *Accipiter soloensis* (54.6% of the total), 2,182 identified Japanese Sparrowhawks *A. gularis* (2.4%), and 31,506 unidentified sparrowhawks (34.5% of the total and 37.7% of all sparrowhawks). Oriental Honey-buzzard was the second most common migrant, with 7,717 individuals (8.5%), and nine Booted Eagles *Hieraaetus pennatus* were recorded (two on the 22 October and singles on 26, 27, 28 October and 2, 5, 11, 15 November, all dark morphs). Peregrine Falcon *Falco peregrinus* of the migratory race *calidus,* clearly distinguishable from the darker resident race *ernesti* (also present in the area), was recorded with seven migrants (four on 3 October; singles on 8 and 25 October and one on 3 November).

Peak passage was recorded on 21 October, when 7,163 raptors were counted. Nearly all migrants (95%, 86,282 individuals) passed during a 28-day period between 9 October and 5 November. During 17–19 October, prolonged heavy rains occurred over east Bali, preventing counts from being undertaken during most of this period (Fig. 2; Table 2).

Visible passage mainly occurred between 10h00–13h00. Most passing flocks were easily detected from the watch sites of Mt Sega, Mt Bagas and Lempuyang, from where a consistent updraft caused by prevailing south-westerly winds resulted in birds passing directly overhead. Raptors moved from the southern slopes of Mt Agung to the Seraya Range and then continued eastward on their way to Lombok. A small percentage followed a more southerly to south-easterly route, to Bugbug–Mt Gumang–Mulu Point, from where they crossed the Lombok Strait at a slightly wider point. Wind speed affected the flight routes from Mt Agung to the crossing points. With strong south-westerly winds the passage was concentrated above Amlapura, the south coast and the southern slopes of the Seraya Range, in order to compensate for wind drift. In these conditions the migrants crossed along the coast south of the range, with small numbers from Mulu Point. However, in light south-westerly winds or in the absence of wind, a more direct route was followed, via Abang–Mt Sega–Mt Bagas and the northern side of the range, and most birds crossed from the coast near Kusambi (Fig. 1). No relationship between the number of passing migrants and wind speed or direction was evident.

Large flocks formed in thermals or in glides between thermals, often involving hundreds of birds of the three species mixing in soaring carousels and in long gliding skeins. Passage of both sparrowhawks and Oriental Honey-buzzards occurred in most weather conditions, including heavy cloud cover and poor visibility. Migrants avoided dense clouds, but they soared often into cumulus clouds at the summit of thermals.

A meteorological phenomena called 'cloud streets' (Haugh 1975, Kerlinger 1989, Pennycuick 1998, Bradbury 2000) occurred on certain days. Elongated cloudy thermal zones, extending several kilometres from Mt Agung to the Lombok Strait, provided constant thermal lift where raptors were able to glide for kilometres without flapping or a significant loss in altitude, apparently enabling the crossing of the strait in a single long glide.

Flocks of 100–300 birds were common on days of heavy passage, and single flocks of over 500 sparrowhawks were recorded on at least two occasions (13 and 21 October). Chinese Sparrowhawks were highly gregarious, whilst Japanese Sparrowhawks passed mainly in singles or small flocks, except for a flock of over 150 birds on 13 October which was observed closely enough to identify the species. During the last week of October this species was also observed in flocks of up to 30 birds. The largest flock of Oriental Honey-buzzards was 47 individuals on 23 October, whilst Booted Eagles and Peregrine Falcons were always observed as single birds.

Large numbers of juveniles were present within flocks, especially Chinese Sparrowhawks, but it was impossible to establish the ratio of adults to juveniles. Owing to high variability in the plumage pattern of Oriental Honey-buzzards, no attempts were made to separate sex and age classes for this species.

Hunting during migration was recorded on three occasions. On 19 October a flock of 12 Chinese Sparrowhawks was observed near Amlapura feeding on swarms of termite alates (Isoptera) after a large emergence following the first seasonal rain. On 15 October a Japanese Sparrowhawk chased a juvenile Scaly-breasted Munia *Lonchura punctulata* into a house in Tirtagangga but failed to catch it. On 14 October a Peregrine Falcon captured a feral pigeon *Columba livia* on Mt Sega and carried it for at least 8 km as it flew to the coast.

A roost site previously located by Imansyah *et al.* (2002) was visited on the evening of 12 October. At this site, in a secondary forest on the south-west slopes of Mt Agung near the temple of Pura Gelap (08°22′S 115°27′E) at 996 m, 52 Chinese Sparrowhawks were observed roosting in trees. Local people acknowledged the regular presence of roosting sparrowhawks during the migration months, but denied that any trapping occurs at this site.

The bird market in Denpasar was visited twice (18 and 31 October) during peak migration, in order to determine if any trade in migrant raptors occurred. On 31 October one juvenile Chinese Sparrowhawk in good health, apparently trapped in Bali, was for sale at Rp.150,000 (c.£8). However, all of the local residents interviewed near the watch sites were unaware of the migration, suggesting a low level of local interest in migratory raptors.

Non-raptor species observed on migration during the study period included large numbers of Fork-tailed Swifts *Apus pacificus* and Blue-tailed Bee-eaters *Merops philippinus*.

DISCUSSION

The large number of migrating raptors observed in this study is the highest ever recorded in Indonesia during a single season, and shows that the islands of Wallacea support an important wintering population of eastern Palearctic raptors.

The magnitude of the raptor migration throughout Indonesia has been largely underestimated, and in all previous studies in Bali and Java only a fraction of the total autumn passage has been recorded. This can be explained by: (1) other studies were based on partial season counts, thus missing a significant part of the passage; and (2) the watch sites used in most previous studies were not in prominent bottleneck areas or concentration points, resulting in a large proportion of the migrants being overlooked. The importance of watch site selection is exemplified by Teluk Terima, Ash's lookout in Bali Barat

National Park (Fig. 1). From this seashore site, only a proportion of the raptors making a landfall on Bali are visible. Migrants cross from Java on a broad front along several kilometres of coastline, and some reach Bali at more southerly locations than Teluk Terima (Imansyah *et al.* 2002, personal observations 2004); this partially explains why Ash's (1993) counts were much lower than ours.

Numbers are strongly in agreement with totals from other watch sites in the East Asian Flyway. During a recent study at Chumphon, southern Thailand, DeCandido *et al.* (2004) recorded 65,000 southbound Chinese and Japanese sparrowhawks and 16,000 Oriental Honey-buzzards. The authors estimated that 'as many as 500,000 raptors may migrate south over Chumphon each year between August and early December'. In autumn 1999, 494,000 migrating Chinese Sparrowhawks were observed in southern Japan (Chong 2000), whilst in Taiwan, total autumn counts of southbound Chinese Sparrowhawks vary between 60,000 and 200,000 individuals (Lin and Severinghaus 1998, D. Christie *in litt.* 2006). The number of migrants that reach Indonesia and the routes they take remain to be determined, but it is likely that the numbers passing over Bali exceed 100,000 individuals.

The main autumn migration corridor known over Indonesia follows the Malacca–Sumatra–Java–Bali–Lesser Sundas route, and most of the birds observed in east Bali probably follow this. However, there is evidence of other southbound corridors through the archipelago. Migrating raptors have been recorded in the South China Sea, 500 km north-west of Borneo (Ellis *et al.* 1990), in Borneo and Bawean (Simpson 1983, Davison 1997, Nijman 2004b, Sukmantoro *et al.* 2005), and in north Sulawesi (Riley 1997). In light of the large numbers of southbound Chinese Sparrowhawks observed in Japan and Taiwan, it is probable that the passage over Borneo and Sulawesi might be significantly larger than is currently known, and that a complex system of corridors traverses the Indonesian Archipelago, but their seasonal use by migrants remains largely unknown.

Published records for eastern Indonesia of the three main species are surprisingly scarce (White and Bruce 1986, Coates and Bishop 1997). This is probably a consequence of a lack of observers, but a number of recent new records through the region indicate an increase in field effort (D. Bishop *in litt.* 2005, N. Brickle *in litt.* 2005, M. Schellekens *in litt.* 2005, Trainor *et al.* in press).

A large proportion of migrating sparrowhawks counted in this study remained unidentified, but because Chinese Sparrowhawk was always the most common identified accipiter (96% of identified sparrowhawks), it is likely that the majority of the unidentified sparrowhawks were also of this species. Many flocks were spotted at a distance of several kilometres using binoculars and spotting scopes. However, even at close range, there were problems in separating individuals of the two species, especially within large flocks. Substantial numbers of juvenile Chinese Sparrowhawks were clearly identified, but, as also noted by Riley (1997), juvenile Chinese Sparrowhawks are similar to juvenile and female Japanese Sparrowhawks. In certain light conditions, the diagnostic dark brown outer primaries of juvenile Chinese Sparrowhawk were not clearly visible, and in large soaring/gliding mixed flocks, other diagnostic characters such as plumage, wing shape or mode of flight (Wattel 1973, Leader and Carey 1995, Herremans and Louette 2000, Ferguson-Lees and Christie 2001) were difficult to distinguish. Given this, Japanese Sparrowhawks were probably often overlooked, especially in large flocks and during hours of heavy passage. Despite this, our observations support the conclusion that Chinese Sparrowhawk is by far the most common migrant sparrowhawk in Indonesia (Nijman 2004a, Germi 2005, Nijman *et al.* 2006).

Monitoring the extent of the illegal trade in migratory raptors is needed. Bird markets in the major cities of Java and Bali should be investigated carefully during peak migration, considering that raptors are generally kept concealed from view at these markets.

ACKNOWLEDGEMENTS

We wish to thank Dimitri van Cleemput, Karina Luyckx, Raul Boscarino and Rik Mandjes for participating in the counts, and John Ayres for his help at Tinjalas. Colin Pennycuick provided most helpful explanations on flight and meteorology. David Bishop, Nick Blackbeard, Nick Brickle, Mike Carter, Mike Chong, David Christie, Victor Mason, Mark Schellekens, Wishnu Sukmantoro, Colin Trainor and Bas van Balen kindly provided unpublished records, relevant literature and contacts. Vanessa Wise and Mike Thornton edited the manuscript and the English text. Keith Bildstein, Robert DeCandido, Mike McGrady and Ian Newton commented on the manuscript, for which we express our thanks.

REFERENCES

Ash, J. S. (1984) Bird observations on Bali. *Bull. Brit. Orn. Club* 104: 24–35.

Ash, J. S. (1993) Raptor migration on Bali, Indonesia. *Forktail* 9: 3–11.

Bibby, C. J., Burgess, N. D., Hill, D. A. and Mustoe, S. (2000) *Bird census techniques.* London: Academic Press.

Bildstein, K. L. and Zalles, J. I., eds. (1995) *Raptor migration watch-site manual*. Kempton, U.S.A.: Hawk Mountain Sanctuary Association.

Bildstein, K. L. and Zalles, J. I. (2005) Old World versus New World long-distance migration in accipiters, buteos, and falcons. Pp. 154–167 in R. Greenberg and P. P. Marra, eds. *Birds of two worlds: the ecology and evolution of migration*. Baltimore, U.S.A.: Johns Hopkins University Press.

Bradbury, T. (2000) *Meteorology and flight: a pilot's guide to weather*. London: A. & C. Black.

Chong, M. (2000) Asian raptors migration areas and population survey (Asian Raptor M.A.P.S.): cooperative raptor migration in haze project: autumn 1999 report summary. *Asian Rap. Bull.* 1: 12–15.

Coates, B. J. and Bishop, K. D. (1997) *A guide to the birds of Wallacea*. Alderley, Queensland, Australia: Dove Publications.

Davison, G. W. H. (1997) Bird observations on Pulau Laut, South Kalimantan. *Kukila* 9: 122–125.

DeCandido, R., Nualsri, C., Allen, D. and Bildstein, K. L. (2004) Autumn 2003 raptor migration at Chumphon, Thailand: a globally significant raptor migration watch site. *Forktail* 20: 49–54.

Ellis, D. H., Kepler, A. K. and Kepler, C. B. (1990) Evidence for a fall raptor migration pathway across the South China Sea. *J. Raptor Res.* 24(1): 12–18.

Ferguson-Lees, J. and Christie, D. A. (2001) *Raptors of the world*. London: Christopher Helm.

Fuller, M. R. and Mosher, J. A. (1981) Methods of detecting and counting raptors: a review. *Stud. Avian Biol.* 6: 235–246.

Germi, F. (2005) Raptor migration in east Bali, Indonesia: observations from a bottleneck watch site. *Forktail* 21: 93–98.

Haugh, J. R. (1975) Local ephemeral weather conditions and their effects on hawk migration routes. Pp. 72–84 in M. Harwood, ed. *Proceedings of the North American Hawk Migration Conference 1974*. Washington, U.S.A.: Hawk Migration Association of North America.

Herremans, M. and Louette, M. (2000) A partial post-juvenile molt and transitional plumage in the Shikra *(Accipiter badius*) and Grey Frog Hawk (*Accipiter soloensis*). *J. Raptor Res*. 34(4): 249–261.

Imansyah, M. J., Purwandana, D., Oni, P. B., Andrian, N. and Sudaryanto (2002) Estimasi jalur migrasi burung raptor migrant Asia di Bali [Estimating the migration path of Asian migratory raptors in Bali]. Unpublished report. (In Indonesian).

Kerlinger, P. (1989). *Flight strategies of migrating hawks*. Chicago: University of Chicago Press.

Lane, B. A. and Parish, D. (1991) A review of the Asian-Australasian bird migration system. Pp. 291–312 in T. Salathé, ed. *Conserving migratory birds*. Cambridge, U.K.: International Council for Bird Preservation. (ICBP Technical Publication No. 12).

Leader, P. J. and Carey, G. J. (1995) Identification of Japanese Sparrowhawk and Besra. *Hong Kong Bird Report* 1994: 157–169.

Lin, W. H. and Severinghaus, L. L. (1998) Raptor migration and conservation in Taiwan. Pp. 631–639 in R. D. Chancellor, B.-U. Meyburg and J. J. Ferrero, eds. *Holarctic birds of prey*. Merida, Spain: ADENEX and World Working Group on Birds of Prey.

Mason, V. N. (1994) Raptors en route. *Tjerutjuk, Bull. Bali Bird Club* 2(3): 6.

Nijman, V. (2001a) Autumn migration of raptors on Java, Indonesia: composition, direction and behaviour. *Ibis* 143: 99–106.

Nijman, V. (2001b) Spatial and temporal variation in migrant raptors on Java, Indonesia. *Emu* 101: 259–263.

Nijman, V. (2004a) Magnitude and timing of migrant raptors in central Java, Indonesia. *Ardea* 92(2): 161–168.

Nijman, V. (2004b) Survey on birds of prey and owls (Falconiformes and Strigiformes) on Bawean, Java Sea, with records of three species new to the island. *Raffles Bull. Zool*. 52(2): 647–651.

Nijman, V., Germi , F. and van Balen, B. (2006) Relative status of two species of migrant sparrowhawks on Java and Bali, Indonesia. *Emu* 106(2): 157–162.

Nuraeni, S. and Suparman, U. (2000) Raptor migration at Puncak and Cibulao, West Java, Indonesia: October and November 1999. *Asian Rap. Bull*. 1: 7–9.

Pennycuick, C. J. (1998) Field observations of thermals and thermal streets, and the theory of cross-country soaring flight. *J. Avian Biol.* 29: 33–43.

Riley, J. (1997) The birds of Sangihe and Talaud, North Sulawesi. *Kukila* 9: 3–36.

Simpson, D. M. (1983) Autumn migration of land birds off North Borneo in 1981. *Sea Swallow* 32: 48–53.

Sukmantoro, W., Suparman, U. and Wen Sin, L. (2005) A study on migratory raptors in Sumatra, Kalimantan, Java, Bali and Nusa Tenggara, Indonesia: 2001–2004. Report presented at the Fourth Symposium on Asian Raptors. Taiping, Malaysia: ARRCN and Malaysian Nature Society.

Trainor, C. R., Benstead, P. J., Martin, K., Lesmana, D., Agista, D., Benstead, M. C., Drijvers, R. and Setiawan, I. (in press) New bird records for Nusa Tenggara islands: Moyo, Sumbawa, Sumba, Flores, Pulau Besar and Timor. *Kukila* 13.

Wattel, J. (1973) *Geographical differentiation in the genus Accipiter*. Cambridge, Mass., U.S.A: Nuttall Ornithological Club.

White, C. M. N. and Bruce, M. D. (1986) *The birds of Wallacea (Sulawesi, the Moluccas and Lesser Sundas Islands, Indonesia): an annotated check-list*. London: British Ornithologists' Union (Check-list 7).

Zalles, J. I. and Bildstein, K. L. (2000) *Raptor watch: a global directory of raptor migration sites*. Cambridge, U.K. and Kempton, U.S.A.: BirdLife International and Hawk Mountain Sanctuary.

Francesco Germi, 46 (2F2) Elm Row, Edinburgh EH7 4AH, Scotland, U.K. Email: Francesco@germi.freeserve.co.uk
Dono Waluyo, Jl. Angrek I no. 9, Amlapura, Bali, Indonesia.