CONSERVATION ALERT

In the market for extinction: Sukahaji, Bandung, Java, Indonesia

SERENE C. L. CHNG, MARISON GUCIANO & JAMES A. EATON

Introduction

Sukahaji market, Bandung, Java, is considered to be the largest wildlife market in West Java outside Jakarta. Indonesian-based NGOs have been surveying this market for a number of years and have identified its importance for the trade in protected and threatened species. Although little has been published about Sukahaji, it was included in ProFauna's 2009 survey of parrots, raptors and protected bird species sold in markets across Java (ProFauna 2009) and they reported that as a result of several confiscation operations by the enforcement agencies, no protected species were on sale.

Under current Indonesian legislation, only non-protected native wildlife may be collected and traded and annual quotas for this are set by the Indonesian Directorate General of Forest Protection and Nature Conservation (PHKA). However, since 2002, no harvest or export quota has been allocated for birds, other than the capture of small quantities of a few select species for use as breeding stock for commercial breeding operations (Shepherd 2006, ProFauna 2008), thereby making any capture or trade of any wild birds in Indonesia illegal, regardless of whether the species is listed as protected or not.

This report provides a complete inventory of wildlife sold in Sukahaji market on one date in 2016 in order to highlight the scale of the trade in protected wildlife, and alert the appropriate enforcement authorities and encourage them to take action against the illegal trade of protected species there. The survey data also contribute to a baseline from which to evaluate further conservation efforts and impacts, emerging trends, and guide future conservation and research efforts for birds and other wildlife in Indonesia, including species of conservation concern.

Methods

On 4 September 2016, TRAFFIC researchers carried out a survey at Sukahaji market in Bandung of all avian and mammal species and protected reptiles. The market consists of 71 shops and stalls along Jalan Peta, Suka Asih and Bojongloa Kaler. Where possible, individuals were recorded to subspecies level although this was often difficult owing to the

difficulty in obtaining clear views for identification of subtle plumage differences. Domesticated animals, defined as those that show a significant proportion of mutations, either with colour differing from wild specimens or hybridisation with other species, were not included in the inventory. Examples included canaries *Serinus* sp., lovebirds *Agapornis* sp., Budgerigars *Melopsittacus undulatus* and Java Sparrows *Lonchura oryzivora*.

Observers only counted wildlife openly displayed, except in two cases where shop sellers showed the researchers a Javan Slow Loris *Nycticebus javanicus* and a Changeable Hawk Eagle *Niseatus cirrhatus* hidden from view. No attempts were made to obtain images or purchase wildlife. Price data were obtained opportunistically when it was possible to engage with dealers without appearing too suspicious or by observing openly advertised prices. Additional information, such as the source and origin of birds, was also solicited from dealers in conversation. An exchange rate of US\$1 = IDR 13,100 was used.

Results

Species, status and origin

A total of 3,178 birds of 154 species were counted from 71 stalls, an average of 45 birds per stall, with a maximum of 374 birds on one stall. The most numerous species was the Oriental White-eye *Zosterops palpebrosus*, with 526 individuals recorded, followed by the Orange-headed Thrush *Geokichla citrina*, a 'star species' in Indonesian national songbird contests (Jepson 2008). Although the Oriental White-eyes were all thought to be wild-caught, according to the traders many of the thrushes were either 'farmed' or captive-bred (see below under Sources).

Eight species seen (48 individuals) are currently classified as threatened on the IUCN Red List. At the time of writing, a number of species are likely to be uplisted or added to the list as threatened as a result of the annual revision of the Red List of bird species currently underway (BirdLife International 2016), including Sumatran Laughingthrush *Garrulax bicolor* and Greater Green Leafbird *Chloropsis sonnerati*.

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Legally protected birds comprised 19 species (324 individuals) seen at 33 stalls, which also

carried a range of non-protected species. Indeed, most stalls offered a variety of species from multiple sources, with no particular specialisation by species or origin. Notably however, one stall sold birds at higher prices than the others and these included 11 species highlighted as of concern at the Asian Songbird Crisis Summit (Wildlife Reserves Singapore and TRAFFIC in prep); these included two Critically Endangered species, two Bali Myna Leucopsar rothschildi and two Black-winged Myna Sturnus melanopterus and 10 Near Threatened Straw-headed Bulbul Pycnonotus zeylanicus. The local enforcement agencies were informed about all the protected species that we had seen for sale.

Native species accounted for 3,108 birds of 139 species. Of these, 35 species were endemic to Indonesia (605 individuals recorded in the market—19% of all individuals), and a further 555 individuals were from 32 endemic subspecies. Some traders volunteered information on the origin of native birds, perhaps in a bid to justify high prices. For example, two high-priced Whiterumped Shamas Copsychus malabaricus, one at IDR 12.5 million (US\$954) and one at IDR 4.5million (US\$344) were said to be from Medan, while a Greater Green Leafbird for sale at IDR 1.3 million (US\$99) was said to be from Sumatra. These two species are used in songbird competitions, and their provenance is one of the considerations in determining the quality and therefore the value of specific individuals. Occasionally, a trader offered incorrect information—for example, a Finch-billed Myna Scissirostrum dubium, an endemic species from Sulawesi, was claimed to originate from Riau. Most of the species observed are found in Java, indicating that the bulk of the birds seen could be sourced locally, but the presence of other species indicates the movement of birds from other parts of Indonesia. From eastern Indonesia, these included two Hooded Butcherbirds Cracticus cassicus from Papua, and Loriidae species from Maluku and Papua. There were also several species restricted to Sumatra and/or Kalimantan, including Sumatran Laughingthrush, Sumatran Treepie Dendrocitta occipitalis, Crested Jay Platylophus galericulatus and Sunda Scops Owl Otus lempiji.

Only 15 non-native species, totalling 70 birds, were recorded. Traders correctly informed us of the range of certain non-native species, including Pakistan as the origin of Bimaculated Lark *Melanocorypha bimaculata*, and Hong Kong as on the trading route for Chinese Hwamei *Garrulax canorus*, suggesting that these traders had good knowledge of the species they were selling. One of the surprises of the survey was the record of two un-ringed Vulnerable Timneh Parrots *Psittacus timneh*, a species confined to west Africa, trade

in which was recently banned at the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) meeting held in October 2016, although this decision has yet to come into force. This is the first time we have observed the species during any of our Indonesian market surveys in the past five years. On the CITES trade database, there is a single recorded import of Timneh Parrots into Indonesia in 2003, when 10 captive-bred birds were imported from South Africa for commercial trade. As this is a long-living species, it is possible that the two birds seen were part of this legal import; however, as neither bird was ringed, it could not be determined whether the birds were of captive or wild origin. As noted in Shepherd et al. (2016), any Chinese Hwamei seen in Indonesia has been illegally imported, as the CITES trade database shows no records of this species ever being imported since it was first listed in Appendix II in 2000—14 individuals were seen on three different stalls in our survey.

Sources

Almost all the birds seen were thought to be wild-caught, based on conversations with traders, on their poor condition and because most were adults. A few birds were said to be captive-bred. Two of the Bali Mynas observed were ringed, and another two were claimed by the trader to be captive-bred. A Black-winged Myna (subspecies *melanopterus*) was said to have been captive-bred in Bali.

One shop had 211 Orange-headed Thrushes, mostly adults with fresh plumage, and it is thought that these birds could have been farmed, based on previous accounts describing the harvest of chicks for hand-rearing; however, this practice is unregulated and it may have negative impacts on wild populations (Kristianto & Jepson 2011, Chng & Eaton 2016a).

Price

Prices for 41 species were opportunistically collected, including target species of particular conservation concern. There did not appear to be any clear difference between prices of protected and non-protected species. The prices of individual birds appeared to differ according to a range of factors, including the quality of the song, singing ability and level of training.

Prices for a number of species, including some of conservation priority, were generally lower than those recorded in Jakarta, Surabaya, Yogyakarta and Malang in 2014 and 2015. Black-winged Myna (*melanopterus*) prices ranged from IDR 450,000 (US\$34) to IDR 2.25 million (US\$172) in this survey, much lower than prices of US\$103–256 previously recorded (Shepherd *et al.* 2015). A Javan



Plate 1. General view of market stall showing the variety of birds on display, including Javan Banded Pitta *Hydrornis guajanus*, Sukahaji market, Bandung, Java, 4 September 2016.

Banded Pitta Hydrornis guajanus was offered for IDR 350,000 (US\$27) in Sukahaji market (Plate 1), cheaper than one offered in Jakarta in 2015 for US\$42. Straw-headed Bulbul prices ranged from IDR 6 million (US\$460) for a juvenile to IDR 7.5 million (US\$570) for an adult in this survey—in the same range as previously recorded prices of US\$86-1,203 (Bergin et al. in prep). A Sumatran Laughingthrush was offered for IDR 1.5 million (US\$115), which is comparable to average prices recorded in Jakarta, central and eastern Java in 2014 and 2015 (Shepherd *et al.* 2016). In contrast, a Greater Green Leafbird was offered for IDR 1.3 million (US\$99), much higher than US\$44 in 2014 (Chng et al. 2015), but it could be that this individual had a good quality song.

Other observations

In addition to the birds recorded, 34 mammals from five species, including one protected Javan Slow Loris *Nycticebus javanicus*, and 10 reptiles from protected species were also observed (Table 1).

Plate 2. Oriental Bay Owls *Phodilus badius* feeding on plucked munia *Lonchura* sp., Sukahaji market, 4 September 2016.



One particularly unpleasant sight was feeding time for the Oriental Bay Owls *Phodilus badius* and Black-winged Kite *Elanus caeruleus*. The trader would pluck the body feathers from live munia *Lonchura* sp. and then pass the bird to the owls and kites (Plates 2 & 3). To feed all the owls and raptors seen in the market would require a substantial number of small birds and this probably means that munias and other low-value, large-volume species are not just sold for pets, but also as a source of food for predators kept as pets.

Table 1. Mammals and protected reptiles recorded at Sukahaji market.

Species/ systematic name	Number
Large Flying Fox Pteropus vampyrus	24
Common Palm Civet Paradoxurus hermaphroditus	6
Long-tailed Macaque Macaca fascicularis	2
Javan Loris Nycticebus javanicus	1
Lesser Treeshrew Tupaia minor	1
Total	34
Crocodile sp. <i>Crocodylus</i> sp.	5
Indonesian Blue-tongued Skink Tiliqua gigas	2
Mangrove Monitor Varanus indicus	1
Water Monitor Varanus salvator	1
Yellow-spotted Monitor Varanus gouldi (V. panoptes ho	rni) 1
Total	10

Discussion

In 2009, ProFauna surveyed 56 permanent stalls and 17 street vendors, and reported that they found only one protected bird for sale, a Crested Serpent Eagle *Spilornis cheela* (ProFauna 2009), but in our survey, although the number of stalls was similar, over 10% of the birds recorded were protected. Law enforcement in this market today is clearly inadequate, with enforcement agencies turning a blind eye to the open sale of protected

species. Furthermore, the collection of native birds is not allowed due to zero harvest quotas (with the exception of the capture of certain non-protected species for breeding purposes), yet this and subsequent trade continues openly in defiance of the laws. We therefore urge the Indonesian authorities to carry out decisive law enforcement actions against poachers and illegal traders; a staggered approach could be considered due to high volumes in trade, focusing first on protected species then on non-protected but wildcaught species, and prosecuting violators. The Government of Indonesia is currently revising the relevant legislation and is urged to review and provide enhanced legal protection for species threatened by trade, especially those not already on the protected species list such as Sumatran Laughingthrush and Greater Green Leafbird.

Unlike previous surveys on Java, Indonesia, and other countries e.g. Thailand and Vietnam (Chng *et al.* 2015, Chng & Eaton 2016a, b, Eaton *et al.* in prep) very few fledglings or juvenile birds were noted; the reason for this is unknown.

Several species of native birds, including Straw-headed Bulbul, White-rumped Shama and Greater Green Leafbird, probably originate from either Borneo, including both East Malaysia and Kalimantan (with several recent seizures of shipments from Borneo to Java involving the latter two species), or Peninsular Malaysia due to the collapse of wild populations in Indonesia (Eaton *et al.* 2015, Chng & Eaton 2016a).

Plate 3. Black-winged Kite *Elanus caeruleus* feeding on plucked munia sp., Sukahaji market, 4 September 2016.



Species of particular interest

From the Asian Songbird Crisis Summit priority list of 28 songbird taxa in the Greater Sunda region of highest conservation priority and most at risk from trade, 21 were found in this survey, totalling 1,270 individuals (40% of the total), including eight of the 12 species in need of immediate action.

Of particular concern to the authors is the continued trade in the Greater Green Leafbird, a species that had been overlooked until it was recorded in huge numbers in a survey of Jakarta bird markets (Chng *et al.* 2015). It is now also a heavily traded species from Kalimantan to Java, based on seizure data in recent years (Chng & Eaton 2016a), and evidence has pointed to large numbers being exported from Malaysia to Indonesia, including up to 6,000 a month from Sarawak to Kalimantan (A. Miller pers. comm.).

Despite their adaptability to a whole range of habitats, starlings Sturnidae continue to be one of the most highly threatened families due to trade in the region, including four native species that would be abundant in their native, open habitats if it were not for the bird trade. A pair of the Critically Endangered Bali Myna was found for sale at IDR 15 million (US\$1,145), despite it being extinct in the wild, with the small number of surviving free-flying birds the result of massive reintroduction efforts (Eaton *et al.* 2015). Even the previously ubiquitous White-vented Myna *Acridotheres javanicus*, a common and abundant non-native species in neighbouring Malaysia and

Plate 4. Javan Owlet *Glaucidium castanopterum*, Sukahaji market, 4 September 2016.



Singapore and soon to be uplisted to Vulnerable, is now rare on its native Java, where flocks of more than 20 are seldom encountered today (JAE pers. obs.).

Of particular note, just prior to our survey the Endangered Rufous-fronted Laughingthrush *Garrulax rufifrons* was seen at Sukahaji market (MG pers. obs.), with the trader providing details of where the birds were trapped, which will hopefully lead to follow-up field surveys to establish the species's status in the wild. Rufous-fronted Laughingthrush has only been recorded from a single site since 1990 (Eaton *et al.* 2015).

An unexpectedly high number of Van Hasselt's Sunbirds *Leptocoma brasiliana* was recorded at Sukahaji market, mostly males. This is a protected species and thus should not be traded. Although sunbirds have been observed by the authors on other surveys, the numbers seen during this survey—192 individuals in 11 shops—was very high, compared with 33 individuals in four shops in eastern and central Java (Chng & Eaton 2016a) and 28 individuals in six shops in Jakarta (Chng *et al.* 2015). Shopkeepers said that this species was easy to keep, requiring just a milk and sugar mix to sustain it, and also had a melodious call compared with other sunbird species.

Widespread countryside species such as Barwinged Prinia Prinia familiaris, Brown Prinia P. polychroa, Common Iora Aegithina tiphia and tailorbirds Orthotomus sp. are also regular in the markets; during this survey, a combined total of 111 individuals of five species of Prinia and Orthotomus was recorded. In 2015, 524 individuals of seven species from these two families were recorded from five markets in central and eastern Java (Chng & Eaton 2016), while 309 individuals from six species were recorded in 2014 (Chng et al. 2015). Some of these species appear to be increasingly popular in singing competitions. Hundreds of Prinia and Orthotomus have been recorded in recent seizures of shipments (Asikin, 2016, Lampung Post 2016).

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References

- Asikin, Z. (2016) BKSDA Lampung Gagalkan Penyelundupan 1.500 Ekor Burung. *Teras Lampung* (Indonesia). 25 August. https://www. teraslampung.com/bksda-lampung-gagalkan-penyelundupan-1-500-ekor-burung/
- BirdLife International (2016) IUCN Red List for birds. Downloaded from http://www.birdlife.org on 31/03/2016.

- Chng, S. C. L. & Eaton, J. A. (2016a) *In the market for extinction: Eastern and Central Java*. TRAFFIC: Petaling Jaya, Malaysia.
- Chng, S. C. L. & Eaton, J. A. (2016b) Snapshot of an on-going trade: an inventory of birds for sale in Chatuchak weekend market, Bangkok, Thailand. *BirdingASIA* 25: 24–29.
- Chng, S. C. L., Eaton, J. A., Krishnasamy, K., Shepherd, C. R. & Nijman, V. (2015) In the market for extinction: an inventory of Jakarta's bird markets. TRAFFIC: Petaling Jaya, Malaysia.
- Eaton, J. A., Shepherd, C. R., Rheindt, F. E., Harris, J. B. C., van Balen, S. (B.), Wilcove, D. S. & Collar, N. J. (2015) Trade-driven extinctions and near-extinctions of avian taxa in Sundaic Indonesia. *Forktail* 31: 1–12.
- Eaton, J. A., Nguyen D. T. M., Willemsen, M., Lee, J. & Chng S. C. L. (in prep.) An inventory of Viet Nam's bird shops. TRAFFIC.
- Gill, F. & Donsker, D. (Eds). (2016) IOC World Bird List (v 6.3). doi: 10.14344/ IOC.ML.6.3. http://www.worldbirdnames.org/
- Kristianto, I. & Jepson, P. (2011) Harvesting Orange-headed Thrush Zoothera citrina chicks in Bali, Indonesia: magnitude, practices and sustainability. Oryx 45: 492–499.
- Jepson, P. (2008) Orange-headed Thrush *Zoothera citrina* and the avian X-factor. *BirdingASIA* 9: 58–60.
- Lampung Post (2016) Tarsius dan Orang Utan Tanpa Dokumen Diamankan di Bakauheni. *Lampung Post* (Indonesia). http://www.lampost.co/berita/tarsius-dan-orang-utan-tanpa-dokumen-diamankan-di-bakauheni.
- ProFauna (2008) Pirated parrots. ProFauna's investigation of the Indonesian parrot smuggling to the Philippines. ProFauna Indonesia, Malang, Indonesia. http://www.profauna.net/sites/default/ files/ downloads/publication-2008-pirated-parrot.pdf
- ProFauna (2009) Wildlife trade survey on the bird markets in Java. ProFauna Indonesia, Malang, Indonesia. http://worldanimal.net/documents/final-report-bird-market-survey-2009.pdf
- Shepherd, C. R., Nijman, V., Krishnasamy, K., Eaton, J. A. & Chng, S. C. L. (2015) Illegal trade pushing the Critically Endangered Black-winged Myna Acridotheres melanopterus towards imminent extinction. Bird Conserv. Internatn. 26: 147–153.
- Shepherd, C. R., Eaton, J. A. & Chng, S. C. L. (2016) Nothing to laugh about – the ongoing illegal trade in laughingthrushes (*Garrulax* species) in the bird markets of Java, *Indonesia. Bird Conserv. Internatn.* DOI:10.1017/S0959270916000320.

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Appendix 1. Birds recorded for sale in Sukahaji market, Bandung, Java, Indonesia, 4 September 2016 Key: Species protected under Indonesian law are in **bold**, * = non-native species

Species		No. of shops			No. of shops
Oriental White-eye Zosterops palpebrosus	526	29	Hill Blue Flycatcher Cyornis banyumas	6	6
Orange-headed Thrush Geokichla citrina	224	10	Indigo Flycatcher Eumyias indigo	6	3
Javan Munia Lonchura leucogastroides	202	5	Eurasian Tree Sparrow Passer montanus	6	4
Sooty-headed Bulbul Pycnonotus aurigaster	197	17	Bali Myna Leucopsar rothschildi CR	5	3
Van Hasselt's Sunbird Leptocoma brasiliana	192	11	Barn Owl <i>Tyto alba</i>	5	2
Zebra Dove Geopelia striata	152	13	Chestnut-backed Scimitar Babbler	_	2
Asian Pied Starling <i>Gracupica contra</i>	146	36	Pomatorhinus montanus	5	3
Australasian Bushlark Mirafra javanica	124	14	*Common Myna Acridotheres tristis	5	5
Javan Grey-throated White-eye Lophozosterops javanicus	104	12	Lesser Green Leafbird <i>Chloropsis cyanopogon</i> Mountain White-eye <i>Zosterops montanus</i>	5 5	5 3
Yellow-vented Bulbul <i>Pycnonotus goiavier</i>	83	16	Silver-eared Mesia <i>Leiothrix argentauris</i>	5	2
Common lora Aegithina tiphia	63	12	Sumatran Laughingthrush <i>Garrulax bicolor</i> VU	5	2
White-rumped Shama Copsychus malabaricus	61	17	Sunda Scops Owl Otus lempiji	5	3
Scaly-breasted Munia Lonchura punctulata	60	1	*Vinous-breasted Myna Acridotheres burmannicus	5	1
Hair-crested Drongo Dicrurus hottentottus	59	6	Asian Fairy Bluebird <i>Irena puella</i>	4	2
Long-tailed Shrike Lanius schach	59	16	Asian Glossy Starling Aplonis panayensis	4	2
White-vented Myna Acridotheres javanicus	56	20	Black-capped Lory Lorius lory	4	3
Oriental Magpie Robin Copsychus saularis	44	20	Black-headed Bulbul Pycnonotus atriceps	4	3
Olive-backed Tailorbird Orthotomus sepium	42	6	Brown-throated Sunbird Anthreptes malacensi		2
Brown Prinia <i>Prinia polychroa</i>	34	9	Common Flameback Dinopium javanense	4	2
Eastern Spotted Dove Spilopelia chinensis	33	10	Common Green Magpie Cissa chinensis	4	4
Indonesian Honeyeater Lichmera limbata	32	1	*Common Pheasant <i>Phasianus colchicus</i>	4	1
Bar-winged Prinia <i>Prinia familiaris</i>	31	20	Lemon-bellied White-eye Zosterops chloris	4	2
*Orange-bellied Leafbird <i>Chloropsis hardwickii</i>	26	1	Olive-backed Sunbird Cinnyris jugularis	4	2
Zebra Finch <i>Taeniopygia guttata guttata</i>	26	1	Pied Bushchat Saxicola caprata	4	3
Black-winged Myna			Red Lory Eos bornea	4	2
Acridotheres melanopterus CR	22	11	Red-breasted Parakeet Psittacula alexandri	4	2
Grey-cheeked Bulbul Alophoixus bres	22	16	Sunda Minivet Pericrocotus miniatus	4	2
Sunda Bulbul Ixos virescens	21	9	Baya Weaver Ploceus philippinus	3	2
Black-naped Oriole Oriolus chinensis	18	5	Blue Nuthatch <i>Sitta azurea</i>	3	3
Javan Fulvetta Alcippe pyrrhoptera	18	7	Chestnut-backed Thrush Geokichla dohertyi	3	2
Orange-spotted Bulbul Pycnonotus bimaculatus		10	Common Tailorbird Orthotomus sutorius	3	3
Chestnut-capped Thrush Geokichla interpres	17	5	Coppersmith Barbet Psilopogon haemacephalus	3	3
Flame-fronted Barbet Psilopogon armillaris	17	4	Crimson-breasted Flowerpecker	_	
Greater Green Leafbird Chloropsis sonnerati	17	13	Prionochilus percussus	3	1
Blue-winged Leafbird Chloropsis cochinchinensi	s 16	12	Large-billed Crow Corvus macrorhynchos	3	2
*Chinese Hwamei Garrulax canorus	14	3	Lineated Barbet Psilopogon lineatus	3	3
Black-winged Kite Elanus caeruleus	13	3	*Mongolian Lark <i>Melanocorypha mongolica</i>	3	2
Cinereous Tit Parus cinereus	13	6	Mountain Leaf Warbler Phylloscopus trivirgatus	3	2
Orange-bellied Flowerpecker			Oriental Bay Owl Phodilus badius	3	1
Dicaeum trigonostigma	13	3	Sunda Cuckooshrike <i>Coracina larvata</i>	3	2
Streaked Bulbul Ixos malaccensis	13	5	Sunda Woodpecker Yungipicus moluccensis	3	3
Finch-billed Myna Scissirostrum dubium	12	5	Asian Golden Weaver <i>Ploceus hypoxanthus</i>	2	1
Ashy Drongo <i>Dicrurus leucophaeus</i>	11	7	*Black-throated Laughingthrush Garrulax chinensis	2	2
Straw-headed Bulbul Pycnonotus zeylanicus VU	11	2	Chestnut-capped Babbler Timalia pileata	2	2
Striated Grassbird Megalurus palustris	11	1	Grey-capped Emerald Dove Chalcophaps indica	2	2
Ruby-throated Bulbul <i>Pycnonotus dispar</i>	10	4	Crescent-chested Babbler		
Hill Myna Gracula religiosa	9	7	Stachyris melanothorax	2	2
Black Drongo Dicrurus macrocercus	7	4	Crimson Sunbird Aethopyga siparaja	2	1
Crested Jay Platylophus galericulatus	7	4	Purple-backed Starling Agropsar sturninus	2	2
Javan Banded Pitta Hydrornis guajanus	7	3	Fire-tufted Barbet Psilopogon pyrolophus	2	_
Pied Fantail <i>Rhipidura javanica</i>	7	5	1Freckle-breasted Woodpecker <i>Dendrocopos anali</i>		2
Chestnut-capped Laughingthrush Garrulax mit	-	4	*Green-cheeked Parakeet Pyrrhura molinae	2	1

•		No. of shops	-		No. of shops
Grey-bellied Bulbul Pycnonotus cyaniventris	2	1	Chattering Lory Lorius garrulus VU	1	1
Hooded Butcherbird Cracticus cassicus	2	2	Collared Kingfisher Todiramphus chloris	1	1
Horsfield's Babbler Malacocincla sepiaria	2	1	Cream-vented Bulbul Pycnonotus simplex	1	1
Javan Kingfisher Halcyon cyanoventris	2	2	*Crested Myna Acridotheres cristatellus	1	1
Javan Whistling Thrush Myophonus glaucinus	2	2	Dusky Lory Pseudeos fuscata	1	1
Long-tailed Sibia Heterophasia picaoides	2	2	Eclectus Parrot Eclectus roratus	1	1
White-browed Shrike-babbler Pteruthius flaviscap	ois 2	1	Island Thrush <i>Turdus poliocephalus</i>	1	1
Ruddy Cuckoo Dove Macropygia emiliana	2	1	Javan Cochoa Cochoa azurea VU	1	1
Brush Cuckoo Cacomantis variolosus	2	1	Javan Owlet Glaucidium castanopterum	1	1
*Senegal Parrot Poicephalus senegalus	2	1	Javan Sunbird Aethopyga mystacalis	1	1
Snowy-browed Flycatcher Ficedula hyperythra	2	2	Lesser Coucal Centropus bengalensis	1	1
Sumatran Treepie Dendrocitta occipitalis	2	1	Lesser Racket-tailed Drongo Dicrurus remifer	1	1
*Timneh Parrot Psittacus timneh VU	2	1	Malaysian Blue Flycatcher Cyornis turcosus	1	1
Chestnut-fronted Shrike Babbler			Oriental Dollarbird Eurystomus orientalis	1	1
Pteruthius aenobarbus	2	2	Plaintive Cuckoo Cacomantis merulinus	1	1
White-crowned Forktail Enicurus leschenaulti	2	1	Siberian Thrush <i>Geokichla sibirica</i>	1	1
Ashy Tailorbird Orthotomus ruficeps	1	1	Small Minivet Pericrocotus cinnamomeus	1	1
*Bimaculated Lark Melanocorypha bimaculata	1	1	Spotted Crocias Crocias albonotatus	1	1
Black Laughingthrush Garrulax lugubris	1	1	Streaked Weaver Ploceus manyar	1	1
Black-capped Babbler Pellorneum capistratum	1	1	Sumatran Drongo Dicrurus sumatranus	1	1
*Black-collared Starling Gracupica nigricollis	1	1	*Sun Parakeet Aratinga solstitialis EN	1	1
Blood-breasted Flowerpecker	1	1	Sunda Laughingthrush Garrulax palliatus	1	1
Dicaeum sanguinolentum	'	'	Velvet-fronted Nuthatch Sitta frontalis	1	1
Blue Whistling Thrush Myophonus caeruleus	1	1	*White-crested Laughingthrush Garrulax leucolop	hus 1	1
Blue-and-white Flycatcher Cyanoptila cyanomela	na 1	1	White-flanked Sunbird Aethopyga eximia	1	1
Blue-streaked Lory Eos reticulata	1	1	Yellow-throated Hanging Parrot Loriculus pusillus	1	1
Brown Lory Chalcopsitta duivenbodei	1	1	Zappey's Flycatcher Cyanoptila cumatilis	1	1
Buffy Fish Owl Ketupa ketupu	1	1	Total	3,178	
Changeable Hawk Eagle Nisaetus cirrhatus	1	1			





carried a range of non-protected species. Indeed, most stalls offered a variety of species from multiple sources, with no particular specialisation by species or origin. Notably however, one stall sold birds at higher prices than the others and these included 11 species highlighted as of concern at the Asian Songbird Crisis Summit (Wildlife Reserves Singapore and TRAFFIC in prep); these included two Critically Endangered species, two Bali Myna Leucopsar rothschildi and two Black-winged Myna Sturnus melanopterus and 10 Near Threatened Straw-headed Bulbul Pycnonotus zeylanicus. The local enforcement agencies were informed about all the protected species that we had seen for sale.

Native species accounted for 3,108 birds of 139 species. Of these, 35 species were endemic to Indonesia (605 individuals recorded in the market—19% of all individuals), and a further 555 individuals were from 32 endemic subspecies. Some traders volunteered information on the origin of native birds, perhaps in a bid to justify high prices. For example, two high-priced Whiterumped Shamas Copsychus malabaricus, one at IDR 12.5 million (US\$954) and one at IDR 4.5million (US\$344) were said to be from Medan, while a Greater Green Leafbird for sale at IDR 1.3 million (US\$99) was said to be from Sumatra. These two species are used in songbird competitions, and their provenance is one of the considerations in determining the quality and therefore the value of specific individuals. Occasionally, a trader offered incorrect information—for example, a Finch-billed Myna Scissirostrum dubium, an endemic species from Sulawesi, was claimed to originate from Riau. Most of the species observed are found in Java, indicating that the bulk of the birds seen could be sourced locally, but the presence of other species indicates the movement of birds from other parts of Indonesia. From eastern Indonesia, these included two Hooded Butcherbirds Cracticus cassicus from Papua, and Loriidae species from Maluku and Papua. There were also several species restricted to Sumatra and/or Kalimantan, including Sumatran Laughingthrush, Sumatran Treepie Dendrocitta occipitalis, Crested Jay Platylophus galericulatus and Sunda Scops Owl Otus lempiji.

Only 15 non-native species, totalling 70 birds, were recorded. Traders correctly informed us of the range of certain non-native species, including Pakistan as the origin of Bimaculated Lark *Melanocorypha bimaculata*, and Hong Kong as on the trading route for Chinese Hwamei *Garrulax canorus*, suggesting that these traders had good knowledge of the species they were selling. One of the surprises of the survey was the record of two un-ringed Vulnerable Timneh Parrots *Psittacus timneh*, a species confined to west Africa, trade

in which was recently banned at the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) meeting held in October 2016, although this decision has yet to come into force. This is the first time we have observed the species during any of our Indonesian market surveys in the past five years. On the CITES trade database, there is a single recorded import of Timneh Parrots into Indonesia in 2003, when 10 captive-bred birds were imported from South Africa for commercial trade. As this is a long-living species, it is possible that the two birds seen were part of this legal import; however, as neither bird was ringed, it could not be determined whether the birds were of captive or wild origin. As noted in Shepherd et al. (2016), any Chinese Hwamei seen in Indonesia has been illegally imported, as the CITES trade database shows no records of this species ever being imported since it was first listed in Appendix II in 2000—14 individuals were seen on three different stalls in our survey.

Sources

Almost all the birds seen were thought to be wild-caught, based on conversations with traders, on their poor condition and because most were adults. A few birds were said to be captive-bred. Two of the Bali Mynas observed were ringed, and another two were claimed by the trader to be captive-bred. A Black-winged Myna (subspecies *melanopterus*) was said to have been captive-bred in Bali.

One shop had 211 Orange-headed Thrushes, mostly adults with fresh plumage, and it is thought that these birds could have been farmed, based on previous accounts describing the harvest of chicks for hand-rearing; however, this practice is unregulated and it may have negative impacts on wild populations (Kristianto & Jepson 2011, Chng & Eaton 2016a).

Price

Prices for 41 species were opportunistically collected, including target species of particular conservation concern. There did not appear to be any clear difference between prices of protected and non-protected species. The prices of individual birds appeared to differ according to a range of factors, including the quality of the song, singing ability and level of training.

Prices for a number of species, including some of conservation priority, were generally lower than those recorded in Jakarta, Surabaya, Yogyakarta and Malang in 2014 and 2015. Black-winged Myna (*melanopterus*) prices ranged from IDR 450,000 (US\$34) to IDR 2.25 million (US\$172) in this survey, much lower than prices of US\$103–256 previously recorded (Shepherd *et al.* 2015). A Javan



Plate 1. General view of market stall showing the variety of birds on display, including Javan Banded Pitta *Hydrornis guajanus*, Sukahaji market, Bandung, Java, 4 September 2016.

Banded Pitta Hydrornis guajanus was offered for IDR 350,000 (US\$27) in Sukahaji market (Plate 1), cheaper than one offered in Jakarta in 2015 for US\$42. Straw-headed Bulbul prices ranged from IDR 6 million (US\$460) for a juvenile to IDR 7.5 million (US\$570) for an adult in this survey—in the same range as previously recorded prices of US\$86-1,203 (Bergin et al. in prep). A Sumatran Laughingthrush was offered for IDR 1.5 million (US\$115), which is comparable to average prices recorded in Jakarta, central and eastern Java in 2014 and 2015 (Shepherd *et al.* 2016). In contrast, a Greater Green Leafbird was offered for IDR 1.3 million (US\$99), much higher than US\$44 in 2014 (Chng et al. 2015), but it could be that this individual had a good quality song.

Other observations

In addition to the birds recorded, 34 mammals from five species, including one protected Javan Slow Loris *Nycticebus javanicus*, and 10 reptiles from protected species were also observed (Table 1).

Plate 2. Oriental Bay Owls *Phodilus badius* feeding on plucked munia *Lonchura* sp., Sukahaji market, 4 September 2016.



One particularly unpleasant sight was feeding time for the Oriental Bay Owls *Phodilus badius* and Black-winged Kite *Elanus caeruleus*. The trader would pluck the body feathers from live munia *Lonchura* sp. and then pass the bird to the owls and kites (Plates 2 & 3). To feed all the owls and raptors seen in the market would require a substantial number of small birds and this probably means that munias and other low-value, large-volume species are not just sold for pets, but also as a source of food for predators kept as pets.

Table 1. Mammals and protected reptiles recorded at Sukahaji market.

Species/ systematic name N	umber
Large Flying Fox Pteropus vampyrus	24
Common Palm Civet Paradoxurus hermaphroditus	6
Long-tailed Macaque Macaca fascicularis	2
Javan Loris Nycticebus javanicus	1
Lesser Treeshrew Tupaia minor	1
Total	34
Crocodile sp. Crocodylus sp.	5
Indonesian Blue-tongued Skink Tiliqua gigas	2
Mangrove Monitor Varanus indicus	1
Water Monitor Varanus salvator	1
Yellow-spotted Monitor Varanus gouldi (V. panoptes horr	ni) 1
Total	10

Discussion

In 2009, ProFauna surveyed 56 permanent stalls and 17 street vendors, and reported that they found only one protected bird for sale, a Crested Serpent Eagle *Spilornis cheela* (ProFauna 2009), but in our survey, although the number of stalls was similar, over 10% of the birds recorded were protected. Law enforcement in this market today is clearly inadequate, with enforcement agencies turning a blind eye to the open sale of protected

species. Furthermore, the collection of native birds is not allowed due to zero harvest quotas (with the exception of the capture of certain non-protected species for breeding purposes), yet this and subsequent trade continues openly in defiance of the laws. We therefore urge the Indonesian authorities to carry out decisive law enforcement actions against poachers and illegal traders; a staggered approach could be considered due to high volumes in trade, focusing first on protected species then on non-protected but wildcaught species, and prosecuting violators. The Government of Indonesia is currently revising the relevant legislation and is urged to review and provide enhanced legal protection for species threatened by trade, especially those not already on the protected species list such as Sumatran Laughingthrush and Greater Green Leafbird.

Unlike previous surveys on Java, Indonesia, and other countries e.g. Thailand and Vietnam (Chng *et al.* 2015, Chng & Eaton 2016a, b, Eaton *et al.* in prep) very few fledglings or juvenile birds were noted; the reason for this is unknown.

Several species of native birds, including Straw-headed Bulbul, White-rumped Shama and Greater Green Leafbird, probably originate from either Borneo, including both East Malaysia and Kalimantan (with several recent seizures of shipments from Borneo to Java involving the latter two species), or Peninsular Malaysia due to the collapse of wild populations in Indonesia (Eaton *et al.* 2015, Chng & Eaton 2016a).

Plate 3. Black-winged Kite *Elanus caeruleus* feeding on plucked munia sp., Sukahaji market, 4 September 2016.



Species of particular interest

From the Asian Songbird Crisis Summit priority list of 28 songbird taxa in the Greater Sunda region of highest conservation priority and most at risk from trade, 21 were found in this survey, totalling 1,270 individuals (40% of the total), including eight of the 12 species in need of immediate action.

Of particular concern to the authors is the continued trade in the Greater Green Leafbird, a species that had been overlooked until it was recorded in huge numbers in a survey of Jakarta bird markets (Chng *et al.* 2015). It is now also a heavily traded species from Kalimantan to Java, based on seizure data in recent years (Chng & Eaton 2016a), and evidence has pointed to large numbers being exported from Malaysia to Indonesia, including up to 6,000 a month from Sarawak to Kalimantan (A. Miller pers. comm.).

Despite their adaptability to a whole range of habitats, starlings Sturnidae continue to be one of the most highly threatened families due to trade in the region, including four native species that would be abundant in their native, open habitats if it were not for the bird trade. A pair of the Critically Endangered Bali Myna was found for sale at IDR 15 million (US\$1,145), despite it being extinct in the wild, with the small number of surviving free-flying birds the result of massive reintroduction efforts (Eaton *et al.* 2015). Even the previously ubiquitous White-vented Myna *Acridotheres javanicus*, a common and abundant non-native species in neighbouring Malaysia and

Plate 4. Javan Owlet *Glaucidium castanopterum*, Sukahaji market, 4 September 2016.



Singapore and soon to be uplisted to Vulnerable, is now rare on its native Java, where flocks of more than 20 are seldom encountered today (JAE pers. obs.).

Of particular note, just prior to our survey the Endangered Rufous-fronted Laughingthrush *Garrulax rufifrons* was seen at Sukahaji market (MG pers. obs.), with the trader providing details of where the birds were trapped, which will hopefully lead to follow-up field surveys to establish the species's status in the wild. Rufous-fronted Laughingthrush has only been recorded from a single site since 1990 (Eaton *et al.* 2015).

An unexpectedly high number of Van Hasselt's Sunbirds *Leptocoma brasiliana* was recorded at Sukahaji market, mostly males. This is a protected species and thus should not be traded. Although sunbirds have been observed by the authors on other surveys, the numbers seen during this survey—192 individuals in 11 shops—was very high, compared with 33 individuals in four shops in eastern and central Java (Chng & Eaton 2016a) and 28 individuals in six shops in Jakarta (Chng *et al.* 2015). Shopkeepers said that this species was easy to keep, requiring just a milk and sugar mix to sustain it, and also had a melodious call compared with other sunbird species.

Widespread countryside species such as Barwinged Prinia Prinia familiaris, Brown Prinia P. polychroa, Common Iora Aegithina tiphia and tailorbirds Orthotomus sp. are also regular in the markets; during this survey, a combined total of 111 individuals of five species of Prinia and Orthotomus was recorded. In 2015, 524 individuals of seven species from these two families were recorded from five markets in central and eastern Java (Chng & Eaton 2016), while 309 individuals from six species were recorded in 2014 (Chng et al. 2015). Some of these species appear to be increasingly popular in singing competitions. Hundreds of Prinia and Orthotomus have been recorded in recent seizures of shipments (Asikin, 2016, Lampung Post 2016).

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References

Asikin, Z. (2016) BKSDA Lampung Gagalkan Penyelundupan 1.500 Ekor Burung. *Teras Lampung* (Indonesia). 25 August. https://www.teraslampung.com/bksda-lampung-gagalkan-penyelundupan-1-500-ekor-burung/

BirdLife International (2016) IUCN Red List for birds. Downloaded from http://www.birdlife.org on 31/03/2016.

- Chng, S. C. L. & Eaton, J. A. (2016a) *In the market for extinction: Eastern and Central Java*. TRAFFIC: Petaling Jaya, Malaysia.
- Chng, S. C. L. & Eaton, J. A. (2016b) Snapshot of an on-going trade: an inventory of birds for sale in Chatuchak weekend market, Bangkok, Thailand. *BirdingASIA* 25: 24–29.
- Chng, S. C. L., Eaton, J. A., Krishnasamy, K., Shepherd, C. R. & Nijman, V. (2015) In the market for extinction: an inventory of Jakarta's bird markets. TRAFFIC: Petaling Jaya, Malaysia.
- Eaton, J. A., Shepherd, C. R., Rheindt, F. E., Harris, J. B. C., van Balen, S. (B.), Wilcove, D. S. & Collar, N. J. (2015) Trade-driven extinctions and near-extinctions of avian taxa in Sundaic Indonesia. *Forktail* 31: 1–12.
- Eaton, J. A., Nguyen D. T. M., Willemsen, M., Lee, J. & Chng S. C. L. (in prep.) An inventory of Viet Nam's bird shops. TRAFFIC.
- Gill, F. & Donsker, D. (Eds). (2016) IOC World Bird List (v 6.3). doi: 10.14344/ IOC.ML.6.3. http://www.worldbirdnames.org/
- Kristianto, I. & Jepson, P. (2011) Harvesting Orange-headed Thrush Zoothera citrina chicks in Bali, Indonesia: magnitude, practices and sustainability. Oryx 45: 492–499.
- Jepson, P. (2008) Orange-headed Thrush *Zoothera citrina* and the avian X-factor. *BirdingASIA* 9: 58–60.
- Lampung Post (2016) Tarsius dan Orang Utan Tanpa Dokumen Diamankan di Bakauheni. *Lampung Post* (Indonesia). http://www.lampost.co/berita/tarsius-dan-orang-utan-tanpa-dokumen-diamankan-di-bakauheni.
- ProFauna (2008) Pirated parrots. ProFauna's investigation of the Indonesian parrot smuggling to the Philippines. ProFauna Indonesia, Malang, Indonesia. http://www.profauna.net/sites/default/ files/ downloads/publication-2008-pirated-parrot.pdf
- ProFauna (2009) Wildlife trade survey on the bird markets in Java. ProFauna Indonesia, Malang, Indonesia. http://worldanimal.net/documents/final-report-bird-market-survey-2009.pdf
- Shepherd, C. R., Nijman, V., Krishnasamy, K., Eaton, J. A. & Chng, S. C. L. (2015) Illegal trade pushing the Critically Endangered Black-winged Myna Acridotheres melanopterus towards imminent extinction. Bird Conserv. Internatn. 26: 147–153.
- Shepherd, C. R., Eaton, J. A. & Chng, S. C. L. (2016) Nothing to laugh about – the ongoing illegal trade in laughingthrushes (*Garrulax* species) in the bird markets of Java, *Indonesia. Bird Conserv. Internatn.* DOI:10.1017/S0959270916000320.

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Appendix 1. Birds recorded for sale in Sukahaji market, Bandung, Java, Indonesia, 4 September 2016 Key: Species protected under Indonesian law are in **bold**, * = non-native species

Species		No. of shops			No. of shops
Oriental White-eye Zosterops palpebrosus	526	29	Hill Blue Flycatcher Cyornis banyumas	6	6
Orange-headed Thrush Geokichla citrina	224	10	Indigo Flycatcher Eumyias indigo	6	3
Javan Munia Lonchura leucogastroides	202	5	Eurasian Tree Sparrow Passer montanus	6	4
Sooty-headed Bulbul Pycnonotus aurigaster	197	17	Bali Myna Leucopsar rothschildi CR	5	3
Van Hasselt's Sunbird Leptocoma brasiliana	192	11	Barn Owl Tyto alba	5	2
Zebra Dove Geopelia striata	152	13	Chestnut-backed Scimitar Babbler	_	2
Asian Pied Starling Gracupica contra	146	36	Pomatorhinus montanus	5	3
Australasian Bushlark Mirafra javanica	124	14	*Common Myna Acridotheres tristis	5	5
Javan Grey-throated White-eye Lophozosterops javanicus	104	12	Lesser Green Leafbird <i>Chloropsis cyanopogon</i> Mountain White-eye <i>Zosterops montanus</i>	5 5	5 3
Yellow-vented Bulbul Pycnonotus goiavier	83	16	Silver-eared Mesia Leiothrix argentauris	5	2
Common Iora Aegithina tiphia	63	12	Sumatran Laughingthrush Garrulax bicolor VU	5	2
White-rumped Shama Copsychus malabaricus	61	17	Sunda Scops Owl Otus lempiji	5	3
Scaly-breasted Munia Lonchura punctulata	60	1	*Vinous-breasted Myna Acridotheres burmannicus	5	1
Hair-crested Drongo Dicrurus hottentottus	59	6	Asian Fairy Bluebird <i>Irena puella</i>	4	2
Long-tailed Shrike Lanius schach	59	16	Asian Glossy Starling Aplonis panayensis	4	2
White-vented Myna Acridotheres javanicus	56	20	Black-capped Lory <i>Lorius lory</i>	4	3
Oriental Magpie Robin Copsychus saularis	44	20	Black-headed Bulbul Pycnonotus atriceps	4	3
Olive-backed Tailorbird Orthotomus sepium	42	6	Brown-throated Sunbird Anthreptes malacensis		2
Brown Prinia <i>Prinia polychroa</i>	34	9	Common Flameback Dinopium javanense	4	2
Eastern Spotted Dove Spilopelia chinensis	33	10	Common Green Magpie Cissa chinensis	4	4
Indonesian Honeyeater Lichmera limbata	32	1	*Common Pheasant <i>Phasianus colchicus</i>	4	1
Bar-winged Prinia <i>Prinia familiaris</i>	31	20	Lemon-bellied White-eye Zosterops chloris	4	2
*Orange-bellied Leafbird <i>Chloropsis hardwickii</i>	26	1	Olive-backed Sunbird Cinnyris jugularis	4	2
Zebra Finch <i>Taeniopygia guttata guttata</i>	26	1	Pied Bushchat Saxicola caprata	4	3
Black-winged Myna			Red Lory Eos bornea	4	2
Acridotheres melanopterus CR	22	11	Red-breasted Parakeet Psittacula alexandri	4	2
Grey-cheeked Bulbul Alophoixus bres	22	16	Sunda Minivet Pericrocotus miniatus	4	2
Sunda Bulbul <i>Ixos virescens</i>	21	9	Baya Weaver Ploceus philippinus	3	2
Black-naped Oriole Oriolus chinensis	18	5	Blue Nuthatch <i>Sitta azurea</i>	3	3
Javan Fulvetta Alcippe pyrrhoptera	18	7	Chestnut-backed Thrush Geokichla dohertyi	3	2
Orange-spotted Bulbul Pycnonotus bimaculatus		10	Common Tailorbird Orthotomus sutorius	3	3
Chestnut-capped Thrush Geokichla interpres	17	5	Coppersmith Barbet Psilopogon haemacephalus	3	3
Flame-fronted Barbet Psilopogon armillaris	17	4	Crimson-breasted Flowerpecker		
Greater Green Leafbird Chloropsis sonnerati	17	13	Prionochilus percussus	3	1
Blue-winged Leafbird Chloropsis cochinchinensi	s 16	12	Large-billed Crow Corvus macrorhynchos	3	2
*Chinese Hwamei <i>Garrulax canorus</i>	14	3	Lineated Barbet Psilopogon lineatus	3	3
Black-winged Kite Elanus caeruleus	13	3	*Mongolian Lark <i>Melanocorypha mongolica</i>	3	2
Cinereous Tit Parus cinereus	13	6	Mountain Leaf Warbler Phylloscopus trivirgatus	3	2
Orange-bellied Flowerpecker			Oriental Bay Owl Phodilus badius	3	1
Dicaeum trigonostigma	13	3	Sunda Cuckooshrike Coracina larvata	3	2
Streaked Bulbul Ixos malaccensis	13	5	Sunda Woodpecker Yungipicus moluccensis	3	3
Finch-billed Myna Scissirostrum dubium	12	5	Asian Golden Weaver Ploceus hypoxanthus	2	1
Ashy Drongo Dicrurus leucophaeus	11	7	*Black-throated Laughingthrush Garrulax chinensis	2	2
Straw-headed Bulbul Pycnonotus zeylanicus VU	11	2	Chestnut-capped Babbler Timalia pileata	2	2
Striated Grassbird Megalurus palustris	11	1	Grey-capped Emerald Dove Chalcophaps indica	2	2
Ruby-throated Bulbul <i>Pycnonotus dispar</i>	10	4	Crescent-chested Babbler	_	_
Hill Myna Gracula religiosa	9	7	Stachyris melanothorax	2	2
Black Drongo Dicrurus macrocercus	7	4	Crimson Sunbird Aethopyga siparaja	2	1
Crested Jay Platylophus galericulatus	7	4	Purple-backed Starling Agropsar sturninus	2	2
Javan Banded Pitta <i>Hydrornis guajanus</i>	7	3	Fire-tufted Barbet <i>Psilopogon pyrolophus</i>	2	
Pied Fantail <i>Rhipidura javanica</i>	7		1Freckle-breasted Woodpecker <i>Dendrocopos analis</i>		2
Chestnut-capped Laughingthrush Garrulax mit	ratus 6	4	*Green-cheeked Parakeet Pyrrhura molinae	2	1

•		No. of shops	-		No. of shops
Grey-bellied Bulbul Pycnonotus cyaniventris	2	1	Chattering Lory Lorius garrulus VU	1	1
Hooded Butcherbird Cracticus cassicus	2	2	Collared Kingfisher Todiramphus chloris	1	1
Horsfield's Babbler Malacocincla sepiaria	2	1	Cream-vented Bulbul Pycnonotus simplex	1	1
Javan Kingfisher Halcyon cyanoventris	2	2	*Crested Myna Acridotheres cristatellus	1	1
Javan Whistling Thrush Myophonus glaucinus	2	2	Dusky Lory Pseudeos fuscata	1	1
Long-tailed Sibia Heterophasia picaoides	2	2	Eclectus Parrot Eclectus roratus	1	1
White-browed Shrike-babbler Pteruthius flaviscap	ois 2	1	Island Thrush Turdus poliocephalus	1	1
Ruddy Cuckoo Dove Macropygia emiliana	2	1	Javan Cochoa Cochoa azurea VU	1	1
Brush Cuckoo Cacomantis variolosus	2	1	Javan Owlet Glaucidium castanopterum	1	1
*Senegal Parrot Poicephalus senegalus	2	1	Javan Sunbird Aethopyga mystacalis	1	1
Snowy-browed Flycatcher Ficedula hyperythra	2	2	Lesser Coucal Centropus bengalensis	1	1
Sumatran Treepie Dendrocitta occipitalis	2	1	Lesser Racket-tailed Drongo Dicrurus remifer	1	1
*Timneh Parrot Psittacus timneh VU	2	1	Malaysian Blue Flycatcher Cyornis turcosus	1	1
Chestnut-fronted Shrike Babbler			Oriental Dollarbird Eurystomus orientalis	1	1
Pteruthius aenobarbus	2	2	Plaintive Cuckoo Cacomantis merulinus	1	1
White-crowned Forktail Enicurus leschenaulti	2	1	Siberian Thrush Geokichla sibirica	1	1
Ashy Tailorbird Orthotomus ruficeps	1	1	Small Minivet Pericrocotus cinnamomeus	1	1
*Bimaculated Lark Melanocorypha bimaculata	1	1	Spotted Crocias Crocias albonotatus	1	1
Black Laughingthrush Garrulax lugubris	1	1	Streaked Weaver Ploceus manyar	1	1
Black-capped Babbler Pellorneum capistratum	1	1	Sumatran Drongo Dicrurus sumatranus	1	1
*Black-collared Starling Gracupica nigricollis	1	1	*Sun Parakeet Aratinga solstitialis EN	1	1
Blood-breasted Flowerpecker	1	1	Sunda Laughingthrush Garrulax palliatus	1	1
Dicaeum sanguinolentum	1	'	Velvet-fronted Nuthatch Sitta frontalis	1	1
Blue Whistling Thrush Myophonus caeruleus	1	1	*White-crested Laughingthrush Garrulax leucolop	hus 1	1
Blue-and-white Flycatcher Cyanoptila cyanomela	na 1	1	White-flanked Sunbird Aethopyga eximia	1	1
Blue-streaked Lory Eos reticulata	1	1	Yellow-throated Hanging Parrot Loriculus pusillus	1	1
Brown Lory Chalcopsitta duivenbodei	1	1	Zappey's Flycatcher Cyanoptila cumatilis	1	1
Buffy Fish Owl Ketupa ketupu	1	1	Total	3,178	
Changeable Hawk Eagle Nisaetus cirrhatus	1	1			



