AMENDMENTS TO APPENDICES I AND II OF THE CONVENTION

Other Proposals

A. PROPOSAL

Inclusion of Collocalia spp. in Appendix II.

B. PROPONENT

Italy.

C. SUPPORTING STATEMENT

- 1. Taxonomy
 - 11. <u>Class</u>: Aves
 - 12. Order: Apodiformes
 - 13. Family: Apodidae
 - 14. Genus: Collocalia Gray 1840

Aerodramus was previously included in the genus Collocalia Gray 1840 (c.f. Peters 1940). Brooke (1970) split Collocalia into: Hydrochous Brooke 1970, Aerodramus Oberholser 1906 and Collocalia.

Brooke (1972) further reviewed *Aerodramus* and listed 12 species, including *papuensis*, and gave *salanganus* specific status but excluded *whiteheadi*. Medway and Pye (1977) listed 12 species in *Aerodramus*, all of which were known to have an ability to echolocate. They included *whiteheadi* in *brevirostris* and *inquietus* in *vanikorensis*. Pratt (1986) listed 13 species including *A. papuensis*, the generic affinity of which was still regarded as uncertain by Medway and Pye (1977) as it was not known whether this taxon could echolocate.

Sibley and Monroe (1990) revert all species to *Collocalia*, in which they include 31 taxa.

Species:

- C. amelis Oberholser 1906
- C. bartschi (Mearns) 1909
- C. brevirostris (Horsfield) 1840
- C. elaphra Oberholser 1906
- C. esulenta (Linnaeus) 1758
- C. francica (Gmelin) 1789
- C. fuciphaga (Gmelin) 1789
- C. germani Oustalet 1876
- C. hirundinacea Stresemann 1914
- C. infuscata Salvadori 1880 p73
- C. inquieta (Kittlitz) 1858
- C. leucophaeus (Peale) 1848
- C. linchi (Horsfield and Moore) 1854

- C. marginata Salvadori 1882
- C. maxima Hume 1878
- C. mearnsi (Oberholser) 1912
- C. nuditarsus (Salomonsen) 1963
- C. orientalis (Mayr) 1935
- C. palawanensis Stresemann 1914
- C. papuensis Rand 1941
- C. pelewensis Mayr 1935
- C. rogersi Deignan 1955
- C. salangana (Streubel) 1848
- C. sawtelli Holyoak 1974
- C. spodiopygius (Peale) 1848
- C. terraereginae (Ramsay) 1875
- C. troglodytes Gray 1845
- C. unicolor (Jerdon) 1840
- C. vanikorensis (Quoy and Gaimard) 1830
- C. vulcanorum (Stresemann) 1926
- C. whiteheadi (Ogilvie-Grant) 1895

The continuing confusion in nomenclature and the similarity in appearance of these taxa, which make identification difficult (e.g. Dickinson 1989a, 1989b), result in the recommendation to list all taxa in the genus *Collocalia*.

- 15. <u>Common Names</u>: English: French: Spanish:
- 16. Code Numbers:
- 2. Biological Data
 - 21. <u>Distribution (current and historical)</u>: The range of the genus *Collocalia* extends from the islands of the western Indian Ocean, through southern continental Asia, the Philippines, and the Indo-Australian archipelago, to north Australia and the west and southwest Pacific.

Details of species distributions are complicated due to frequent changes in taxonomy. The following details (Table 1) are largely from the most recent review, by Sibley and Monroe (1990).

22. <u>Population (estimates and trends)</u>: Limited data are available only for those species the nests of which are commonly traded, viz. *C. fuciphaga, C. germani, C. maxima* and *C. unicolor.* These data are summarized below for geographical/political units. The general trend for those populations which have been investigated is a reduction in numbers (Tables 2 and 3), and in some cases local extinction has been recorded.

<u>China</u>

A small population of *C. (fuciphaga) germani* has recently been discovered on a small island off Hainan (Xian and Zhang 1983), although an account in Swinhoe (1870) suggests that the species has long been overlooked. Kiem (1955) suggests that it may occur occasionally in Yunnan. It is alleged that Nanluo Cave on Daizhou Island, off Hainan was discovered in

1392, however nest harvesting apparently only began about 200 years ago. Several kilos of nests were harvested from this and two other caves early this century, but uncontrolled harvesting has led to reduced yields - in 1984 only about 300g were collected (Y.S. Han *in litt.* to WWF Hong Kong) and only 15 nests were collected in 1991, since then the site has been protected (Cheung 1992).

<u>India</u>

Trade in nests of *C. unicolor* seems to have become insignificant at the end of the 19th century, possibly due to over-exploitation (Baker 1927, Ali and Ripley 1983). Aitken (1894) noted a reduction in the population at Vingorla (Vengurla) Rocks, apparently due to over-collecting of nests. However, recently Narayan (1991) has reported a resurgence of nest collecting at the Vengura Rocks where, currently, there is 'no official control over the business'.

On the Andaman and Nicobar Islands nests of *C. fuciphaga* have long been collected (Barbe 1846, Abdulali 1965). McVean (1976) noted that 'collection should cease or be strictly controlled..... as the populations are probably small..'. Narayan (1991) notes recent 'disturbing reports of unchecked harvesting...'.

<u>Indonesia</u>

Nests of *C. fuciphaga, C. germani* and *C. maxima* are harvested. A trade register from Batavia (Jakarta), dated 1663, referred to trade in consignments of swiftlet nests (Chasen 1931), and records of nest harvests from caves date back to 1743 (Voltz 1905). Koch (1910) recorded how nest collectors ate eggs found in nests, but threw away young birds. No information is available on populations. There is growing interest in 'farming' *C. fuciphaga* in houses in Java, in which case harvesting is kept at a 'sustainable' level (Suwelo and Nugroho 1990 and pers. comm. to D.S. Melville).

Malaysia: Peninsula

Nests of *C. germani* appear to have been traded from Johore since the Ming Dynasty (Chasen 1931). Medway and Wells (1976) record the nests of *C. maxima* being harvested on Tioman and Tulai Islands, whereas for *C. germani* 'the natural breeding periodicity is liable to disruption by the repeated harvesting of nests by man', such collecting apparently being opportunistic, rather than traditionally regulated (Gibson-Hill 1941). Langham (1980) gives details of nest harvesting in a house in Penang. Information on populations is unavailable.

Malaysia: Sarawak

Cranbrook (1984) noted that nest harvests in the Baram District have fluctuated, but since 1951 have declined progressively. Good and Wong (1989) recorded a 43% reduction in the population of *C. fuciphaga* in the Baram district over 17 years. Cranbrook (1984) also noted that in the Baram and at Niah 'present harvesting practices are taking an excessive toll of eggs and young birds'.

Good and Wong (1989) noted a marked decline in the population of *C. maxima* at Niah (Table 3). Nest harvesting at Niah, which formerly was controlled by local tradition (Medway 1957, 1958), became largely uncontrolled and uncontrollable. In April 1989 the Sarawak Government announced a three-year ban on nest collecting at Niah in an attempt to let populations recover (Anon. 1989, Anon. 1990). This ban was of limited effect due, in part, to lack of manpower to enforce it. Additionally, following the ban, the price of raw *C. maxima* nests rose very considerably (M\$140/kg in 1987, M\$800/kg in 1991), which

resulted in more illegal collectors, attracted by the high prices, than before (L. Good *in litt.* to WWF Hong Kong). In March 1992 the Sarawak Government repealed the ban and harvesting is once again allowed by collectors licensed by the Sarawak Forestry Department in accordance with a schedule determined by the Department for the preservation of the birds (F. Gombek *in litt.* to WWF Hong Kong).

With respect to Niah Cave, The Earl of Cranbrook has written (1988): '... it will be some years before the effects of systematic over-collection become apparent. Ultimately, however, it is inevitable that there will be a disastrous crash as the aged birds finally die'.

Malaysia: Sabah

In a detailed examination of swiftlets and nest harvests Francis (1987) recorded declines in both *C. fuciphaga* and *C. maxima* throughout the state. *C. maxima* nest harvests (indicative of swiftlet populations) at Gomantong declined from 12,000 kg in 1924 to only 5,000 kg in 1985, while harvests of *C. fuciphaga* nests declined from 2,500 kg in 1924 to only 400kg in 1985. Simms (1959) estimated that in one cave system over half a million eggs and nestlings died each year during nest collecting activities.

<u>Myanmar</u>

As early as 1929 a government report noted that 'persistent collection [of nests of *C. germani* appears to be reducing the numbers of birds' (Chien Hoe 1959). In 1959 Chien Hoe recorded that 'as a result of over-collection, the number of swifts is dwindling' in the Tavoy Forest Division. J. Blower (*in litt.* to WWF Hong Kong) noted a 41% reduction in nest harvests of *C. germani* between 1951-56 and 1978-82, which he attributed to over-exploitation.

<u>Philippines</u>

Harvesting of *C. germani* has long been practiced in Palawan (Manuel 1937, Hanewald 1988). Information on populations is unavailable, but nest harvesting is known still to continue on Coron Island in the Calamian Island Group (J. Davies pers. comm. to D.S. Melville, September 1991). Dickinson *et al.* (1991) note it as an 'uncommon and very local resident'.

Singapore

Kang *et al.* (1991) detail the breeding biology of both *C. germani* and *C. maxima* in Singapore but population information is lacking. Hails and Jarvis (1987) however note that colonies of *C. germani* 'are in great danger of being totally destroyed by poaching of the nests'.

<u>Sri Lanka</u>

Trade in nests of *C. unicolor* also appears to have collapsed in the 19th. century, but the cause(s) is uncertain (Lewis 1898). There is currently no nest harvesting in Sri Lanka (S.W. Kotagama *in litt.* to WWF Hong Kong).

Thailand

Nest harvesting of *C. germani* dates back to the 18th. century (Giles 1936). Sandham (1978), describing nest collecting at Kho Phi Phi Leh, noted 'despite the fact that some birds and many fledglings die each year because of the collection and many of the eggs are either broken or eaten by the nest collectors, it would appear that the annual 'crop' of nests is steadily increasing'. At the site he estimated about 13,000 pairs of swiftlets in the ratio of 5 *germani* to 1 *maxima*.

Currently nest collection results in the death of many eggs and young, and now a number of former nesting caves have been abandoned (Valli and Summers 1990a). Valli and Summers (1990b) quote a collector as saying "There are no birds left there. They never came back. But we will follow them. Wherever the birds fly we go". Jarujin Nabhibhata (*in litt.* to WWF Hong Kong) recorded a 33% reduction in the population of *C. germani* at Songkhla Lake in the 1970s, which he attributed to over-harvesting and poaching of nests.

Viet Nam

C. germani nests in scattered sites along the coast of Viet Nam (Sallet 1930, Delacour and Jabouille 1931, Wildash 1967), as does *C. brevirostris* (Nguyen 1991). In 1902 nest collecting at Nhatrang stopped due to over-harvesting (Jabouille 1931). Islands in the Bay of Along are a traditional collecting locality (Delacour and Jabouille 1931), which were still occupied in the 1960s (Fischer 1961, 1963, 1965), although no mention is made of nest harvesting. In 1993 C.P.S. Cheung noted harvesting of 2,500 kg, worth US\$ 2 million (export value) from ten islands in Khanh Hoa Province, and J. Ruxton noted nests for sale in Ho Chi Minh City (pers. comm. to WWF Hong Kong).

23. <u>Habitat (trends)</u>: Swiftlets nest in caves and cave-like situations, the echo-locating abilities of many species allowing them to breed in the deepest parts where it is totally dark. *C. fuciphaga* will nest in houses, and in Java new colonies are deliberately established by the fostering of *C. fuciphaga* eggs in the nests of *C. linchi*. There is growing interest in this 'farming' technique (Suwelo and Nugroho 1990), although the resulting total commercial production accounts for a relatively small proportion of Indonesian exports (I.S. Suwelo and E. Nugroho pers. comm. to D.S. Melville, 1990), although Fong (1993) claims that some 30% of nests harvested in Indonesia are from farms. In 1991 the 'Asosiasi Perwaletan Indonesia' (Indonesia Swiftlet Association) had some 600 members (Levingston 1991). Swiftlets also have been 'enticed' to breed in houses in Thailand (Brandt 1966).

Mining of limestone could have an adverse impact on some breeding populations in Sabah (Francis 1987). Good (1991) reports that quarrying has adversely affected some swiftlet populations in Sarawak.

Swiftlets feed on aerial insects (Harrisson 1976, Langham 1980, Francis 1987) and may be adversely affected by changes in species abundance and/or composition through changes to terrestrial habitats, e.g. clearing of forest for agriculture and concomitant use of pesticides (Francis 1987, Cranbrook 1984, Good 1991), however detailed information is lacking.

Habitat management has seldom been undertaken at breeding sites. Chien Hoe (1959) recommended clearing of vegetation, and the shooting of falcons, and Burder (1961) notes that the Sabah Government formerly provided ammunition for shooting hawks around caves. Giles (1936) noted that in mixed colonies of *C. germani* and *C. maxima* in Thailand, the young of *C. maxima* were destroyed if the population appeared to be increasing. Cranbrook (1984) also notes the destruction of *C. salangana* to promote nesting of *C. fuciphaga*.

3. Trade Data

31. <u>National Utilization</u>: Swiftlets generally are not utilized, although some eating of eggs and young swiftlets occurs during nest collection (e.g. Koch 1910, Sandham 1978). The saliva which is used to construct swiftlet nests, however, long has been prized as a tonic by the Chinese. Lau and Melville (in press) give details of the history of nest eating, and discuss the claimed medicinal values of nests.

There is a general lack of information on nest consumption in producing countries, however Francis (1987) notes that in Sabah most nests of *C. maxima* are exported, whereas those of *C. fuciphaga* are largely consumed locally.

The presence of Chinese throughout Southeast Asia suggests that there is local consumption of nests in most, if not all, countries where nests are harvested.

The Philippines formerly was an exporter of nests (Manuel 1937) but as it is currently importing nests (6-7,000 kg annually in 1987 and 1988), there probably are local demands which can no longer be satisfied by local harvests (Lau and Melville in press).

32. <u>Legal International Trade</u>: There are no controls on international trade in swiftlet nests at present, thus all such trade is 'legal', although there appears to be considerable illegal harvesting (e.g. Cranbrook 1984, 1988, Francis 1987, Good and Wong 1989, Valli and Summers 1990a, 1990b).

Current trade in bird nests is almost wholly restricted to the very valuable 'white' nests produced by *C. fuciphaga* and *C. germani*, which use only saliva in the constructing of the nest, and the less valuable 'black' nests of *C. maxima*, which incorporate considerable quantities of feathers. The difference in nest quality are reflected in the price (Table 2). Harvesting of the nests of *C. unicolor*, which contain a considerable proportion of vegetation, recently started again (Narayan 1991) after a period of no harvesting (Ali and Ripley 1983, S.W. Kotagama, *in litt.* to WWF Hong Kong).

Medway (1963, 1966) also refers to claims that *C. troglodytes* produces an edible nest, but this is unconfirmed (Dickinson 1989b) and may relate to misidentification (Dickinson *et al.* 1991). However, as Medway (1966) suggested, it is possible that during periods of high demand it is worth extracting saliva from the nests of this species, as also appears to be the case currently with nests of *C. salangana* (D.R. Wells, *in litt.* to WWF Hong Kong). The Earl of Cranbrook (*in litt.* to WWF Hong Kong) also has recorded saliva from nests of *C. esculenta* being extracted and consumed.

321. <u>Historical</u>: Swiftlet nests became an important item in Chinese cuisine and pharmacy in the late 16th. century (Medway 1963, Lau and Melville in press). Chasen (1931) noted that a trade register from Batavia (Jakarta), dated 1633, referred to the transport of consignments of nests. Trade into China appears to have expanded considerably around this time since there are records of 56,700 kg per year being traded through Batavia in the 18th. century (Medway 1963). Raffles (1817) noted that edible nests were 'annually exported in large quantities from Java and the Eastern Islands for the Chinese market'. Crawfurd (1820) estimated imports into China at about 110 tonnes per year. In 1910 Koch noted that China imported some 76 tonnes each year. Manuel (1936) reported that 109,310 kg of nests were exported from the Netherlands Indies in 1927. Chasen (1931) reported, however, that 48,386, 46,895 and 34,228 kg of nests were imported by China in 1926, 1927 and 1928 respectively. Aitken (1894) reported that nests of *C. unicolor* from the Rutnagherry coast were exported to China via Bombay.

The accuracy of these historic estimates of nests traded is uncertain. Nonetheless, it is clear that the trade is an ancient one, and that annual trade volumes have been substantial for many years.

322. <u>Present Trade</u>: The following data on trade in nests derive from published import and (re-)export data. These seldom allow for the separation of 'white' nests and 'black' nests, or of 'raw' and 'processed' nests. Thus all nest records are lumped. Lau and Melville (in press) further detail the data and discuss difficulties in their interpretation.

Hong Kong is currently the centre of the bird nest trade and is apparently the largest consumer of nests worldwide. Trade data recorded by the Hong Kong Government are detailed in Table 5. Nests are imported mainly from Indonesia, Singapore and Malaysia, with Thailand, Viet Nam and China currently accounting for only 6% by weight (Figure 1). In 1992 133,412 kg of nests, valued at US\$ 61.3 million were imported by Hong Kong, compared with the average annual import of 125 tonnes over the previous ten years. Figure 2 shows how Hong Kong imports have increased considerably during the past decade. The cause of the drop in imports since 1988 is uncertain but may be related to the rapid unit price rise (Figure 3).

The declared value (average price per kilogram) of nests imported into Hong Kong shows a very marked increase, this being particularly noticeable since 1975 (Figure 3), there being a nearly 20-fold increase in the period 1975-1992. Lau and Melville (in press) note that this increase is much too great to be accounted for by inflation and it is thought to be a genuine price increase due to the fact that 'the supply never catches up with the demand', as stated by a Hong Kong trader in the early 1980s (de Groot 1983).

Available export data from known producing countries are given in Table 6. Hong Kong does not impose any tax on bird nests and trade statistics from the Territory are regarded as being relatively reliable. A comparison of recorded exports to Hong Kong with Hong Kong's recorded imports by country (Table 7) indicates that there is unregistered export trade from Malaysia, Singapore and Thailand. Cranbrook (1988) suggests that there is a 'very considerable failure by exporters to declare consignments of birds' nests' leaving Sabah. Attempts to evade export duty are a likely reason for the apparent under-declaration. The over- recording of exports from Indonesia may result partly from trans-shipment of nests through Singapore. Singapore regularly (re-)exports more than it imports (Table 8). The discrepancy of some 10 tonnes a year can not be accounted for by local harvesting (C.J. Hails pers. comm. to D.S. Melville, 1990), and may be due to unrecorded exports from Indonesia and Malaysia.

Available import data from consuming countries are summarised in Table 9. A number of important consumer countries do not record imports, e.g. Canada and the United States.

There are major discrepancies in import and export figures. Notably, in 1990 the weight of nests recorded as imported into Taiwan from Hong Kong was only 4% of the weight reportedly re-exported from Hong Kong to Taiwan - this possibly being due to the 25% import tax imposed on birds' nests by Taiwan. Imports into Japan appear to be under-recorded by up to some 50%. The 200% import tax on bird nest imports

into China probably accounts for no imports being recorded, despite the fact that 16.5% of Hong Kong's re-exports in the period 1989-1991 were recorded as going there. Nests are openly offered for sale in Guangzhou, Guangdong Province and Chinese traders admit to evading import duty (interviews with traders by A. Lau, May 1993).

Data on the weight of nests imported by Japan and Taiwan show a rapid increase since 1985, although Japanese imports have dropped since 1989 (Figure 4), the trend being similar to that found in Hong Kong.

It is estimated that in 1989 (the latest year for which there are reasonably complete data) a minimum of some 150 tonnes of nests entered international trade (Lau and Melville in press). This does not take into account nests consumed locally in the countries of origin. Taking an average nest weight of 8g, this is equivalent to some 19.9 million nests (Lau and Melville in press) in international trade. Hong Kong imports alone in 1991 were equivalent to some 17.5 million nests.

33. <u>Illegal Trade</u>: Since currently there are no controls on international trade none is illegal, although there appears to be a substantial level of under-declaration of nests in trade (32 above).

34. Potential Trade Threats

- 341. <u>Live Specimens</u>: Live swiftlets are not known to be traded, although *C. bartschi* has been introduced to Hawaii from Guam (Bowles 1962, Long 1981, Pratt *et al.* 1987, Sibley and Monroe 1991).
- 342. Parts and Derivatives: There is extensive international trade in the nests of *C. fuciphaga, C. germani* and *C. maxima*. The nests of swiftlets are comprised of salivary secretions from the sublingual glands usually mixed, to a greater or lesser extent, with feathers and/or vegetable matter (Bernstein 1859, Marshall and Folley 1956, Medway 1962c).

A swiftlet nest clearly can be considered to be a derivative of a swiftlet in the context of the definition of a specimen in Article 1 (b) (iii) of the Convention because the 'cement' is a bodily secretion of the bird.

The CITES Secretariat (J. Berney *in litt.* to M. Pani, TRAFFIC Europe Italy Office, 11 June 1993) has advised that:

'The feeling of the Secretariat regarding the listing in the CITES appendices of swiftlets to control the trade in nests is that such listing is possible in the light of the CITES definition of "specimen".

The nests are made of saliva, totally or partially, and saliva is obviously a derivative of the birds, produced by the living animals not as a waste product but to aid digestion and, more notably, to build nests without which the species can not survive. There is a good parallel with corals.

Consequently, if a Party agrees to submit a proposal...,the Secretariat would not object to it being considered by the Conference of the Parties as relevant to CITES'.

The market for swiftlet nests has increased dramatically in the late 1980s in Hong Kong, Taiwan and Japan - all territories with a rising standard of living. It is estimated that the minimum number of nests entering world trade in 1989 was 19.9 million, the real total could have been considerably higher (Lau and Melville in press).

Prices have climbed far above those which would result from inflation and it can be expected that higher prices will lead to yet more intensive harvesting and reduced breeding productivity, leading to still higher prices....

As early as 1894, Aitken suggested that the depreciating value of the nest-collecting rights sold by the Indian Government was attributable to decreased populations, due in turn directly/indirectly to collecting activities. There are many more recent - indications of population declines due to nest harvesting (Section 22 above).

Nest harvesting may have adverse effects on swiftlet populations by:

- direct disturbance, causing birds to desert colonies
- destruction of eggs and young during nest collection
- lipid stress in females laying replacement clutches (Kang et al. 1991).

The Earl of Cranbrook (1988) notes: 'Swiftlets are sedentary, probably pair for life and remain faithful to their particular nest site. The possibilities of recruitment from distant caves are therefore most unlikely. Since swifts as a group are long-lived, it will be some years before the effects of systematic over-collection become apparent. Ultimately, however, it is inevitable that there will be a disastrous crash as the aged birds finally die'. These comments were made with respect to Niah Cave, Sarawak, but are expected to be equally applicable elsewhere.

The breeding biology of *C. fuciphaga, C. germani* and *C. maxima* has been studied in considerable detail by Medway (1962a, 1962b, 1962c), Langham (1980) and Kang *et al.* (1991). The most recent review, by Kang *et al.* (1991), gives detailed recommendations regarding the timing of harvesting (based on scientific studies of nest building and breeding biology) which, if followed, would allow sustainable harvesting of nests.

4. Protection Status

- 41. <u>National</u>: The protection status of swiftlets is summarised in Table 10, for those countries where *C. fuciphaga, C. germani, C. maxima* and *C. unicolor* are known to occur. The protection status of swiftlets in Viet Nam, Brunei Darussalam, and Myanmar is unknown. The degree of protection varies considerably from one country to another.
- 42. International: None known.
- 43. <u>Additional Protection Needs</u>: Evidence at present available indicates a situation that could rapidly lead to the collapse of wild swiftlet populations and hence, a valuable trade. Listing of swiftlets in Appendix II of CITES will ensure that trade records are improved (for nests), thus permitting a closer monitoring of trends in trade volumes.

Listing will draw attention, locally and internationally, to the predicament facing swiftlets. This should,

- a) strengthen popular support for control measures in the producing areas to ensure the long-term sustainability of this very valuable resource, and
- b) draw attention to opportunities for provision of artificial nest sites and thus an increase in (privately) protected populations.

Li z valili i in

Enforcement of harvesting schedules based on current scientific knowledge (e.g. Kang *et al.* 1991) should be implemented at production localities.

5. Information on Similar Species

Currently the nests of no species of *Collocalia*, other than *C. fuciphaga, C. germani, C. maxima* and *C. unicolor*, are known to be extensively harvested commercially, although limited quantities of nests of some other species of *Collocalia* have been reported to be collected.

The complicated taxonomy of this group and the similarity of appearance of adult birds, as well as that of processed nest cement, make it necessary to list all species in the genus. The general increase in demand for nests and the rapidly increasing unit price, coupled with apparent population declines, could result in nests of other species and of lower quality (i.e. with proportionately less saliva) being harvested.

6. Comments from Countries of Origin

The Management Authority of Italy requested comments, with letters dated 18 February 1994, from the following countries of origin: China, India, Indonesia, Malaysia, Myanmar, Philippines, Sri Lanka, Thailand, Viet Nam.

7. Additional Remarks

The proposed listing of *C. fuciphaga, C. germani, C. maxima* and *C. unicolor* is in accordance with Article II.2(a). Other members of the genus are listed in accordance with Article II.2(b).

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TABLE 1 Distribution of Collocalia species

[+] denotes vagrant occurrence.

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Location	Country	Species	Remark	Reference
	Myanmar	C.germani	A 1929 government report noted overharvesting appeared to be reducing the number of birds. In 1959 Chien Hoe recorded the number dwindling in the Tavoy Forest Division as a result of over collecting.	Chien Hoe 1959
One cave system	Sabah	C.fucipbaga	Over half a million eggs and nestlings destroyed each year and this was thought to be one cause of the declining yields of nests.	Simms 1959
Batu Mandi	Sabah	C.maxima C.fucipbaga	A population of up to 10,000 birds was recorded in 1949. Only a few hundred birds remain.	Francis 1987
Niah Great Cave	Sarawak	С.тахіта	82% decrease in period 1932-1990	Banks 1935 Good 1993
Baram	Sarawak	C.fuciphaga	A 43% decrease in population over 17 years	Good and Wong 1989
	Thailand	C.germani	No birds were left in many caves	Valli and Summers 1990
Songkhla Lake	Thailand	C.germani	33% reduction of bird population in 1970s attributed to overhamesting	Jarujin Nabhibhata(in Litt. to WWF HK)

Table 2. Trends in some swiftlet populations in Southeast Asia

.

Surveys of swiftlets in	n Niah caves, Sara	wak*	•	
Source	Numbers and sp	ecies		% decreases over previous counts
Banks (1935)	1,700,000		C. maxima	
Medway (1958)	1,500,000		C. maxima	12%
Medway (1962b)	1,500,000 500,000 2,000,000		C. maxima C. vanikorensis and C. esculenta Total swiftlets	unchanged
Anon. (1974)	1,300,000 200,000		C. maximus and C. vanikorensis C. esculenta	25%
Leh (1987)	450,000 - 80,000 -	610,000 100,000	C.maxima C.vanikorensis and C. esculenta	48%
Good & Wong (1989)	290,000 -	295,000	C. maxima	44%
Good (1990)	150,000 -	298,000	C. maxima	
*after Good (1993)				

Examples of retail nest prices in Hong Kong

	1989 Price (HK\$/tael#)	1992 Price (HK\$/tael#)	1992 Price (US\$/kg)
Whole white nest		770 - 1,450	2,620 - 4,060
good medium	370 - 625 300 - 380		
Yan-ging-ijao *	350	500 - 630	1,700 - 2,140
Processed black nest	120	200 - 500	680 - 1,700
Baw black nest	50 - 60	210	720

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Hard pieces cut from the thickened edge of the whole white nest by traders.
Traditional Chinese unit for weight measurement. 1 tael = 37.8 gram

Hong Kong's Annual Import of Edible Birds' Nest (1980-92)

1980	Country	Quantity (kg)	Value (HK\$)	Unit Value (HK\$/kg)
	Burma	109	188,279	1,727.33
	Indonesia	29,775	17,045,125	572.46
	Japan	205	62,500	304.88
	S. Korea	52	19,200	369.23
	Malaysia	30,752	5,492,805	178.62
	Singapore	43,401	9,384,790	216.23
	Thailand	3,143	6,877,926	2,188.33
	Vietnam	1,311	1,174,646	895.99
	TOTAL	108,748	40,245,271	370.08

1981	Country	Quantity (kg)	Value (HK\$)	Unit Value (HK\$/kg)
	Australia	2	6,180	3,090.00
	Burma	97	214,770	2,214.12
	Indonesia	35,802	19,594,724	547.31
	Japan	42	108,400	2,580.95
	S. Korea	9	5,850	650.00
	Malaysia	30,658	5,584,621	182.16
	Singapore	43,650	12,696,139	290.86
	Thailand	3,529	7,193,360	2,038.36
	Vietnam	1,349	1,923,117	1,425.59
	TOTAL	115,138	47,327,161	411.05

1982	Country	Quantity (kg)	Value (HK\$)	Unit Value (HK\$/kg)
	Burma	516	1,062,132	2,058.40
	China	8,670	138,377	15.96
	Indonesia	36,846	13,488,708	366.08
	Japan	1,400	73,571	52.55
	Malaysia	24,500	4,692,096	191.51
	Singapore	30,218	11,808,181	390.77
	Thalland	1,755	6,443,023	3,671.24
	Vietnam	1.756	3,578,209	2,037.70
	TOTAL	105,661	41,284,297	390.72

1983	Country	Quantity (kg)	Value (HK\$)	Unit Value (HK\$/kg)
	Burma	229	275,102	1,201.32
	China	374	788,590	2,108.53
	Indonesia	33,727	11,668,613	345.97
	Malaysia	28,281	5,014,989	177.33
	Singapore	11,465	7,751,408	676.09
	Thailand	4,292	10,626,499	2,475.89
	USA	168	168,526	1,003.13
	Vietnam	2,789	5,394,489	1,934.20
	TOTAL	81,325	41,688,216	512.61

4004	Country	Quantity (kg)	Value (HK\$)	Unit Value (HK\$/kg)
1984	Quima	195	466,521	2,392.42
	Obias	35	12.000	342.86
	China	40 430	21,998,916	544.12
	Indonesia	18	13,500	750.00
	Japan	24 299	4 795 093	197.34
	Malaysia	14 506	12 805 286	882.76
	Singapore	14,500	14 760 043	4,717,18
	Thalland	3,129	251,000	1,189,57
	USA	211	<u> </u>	3 386 33
	Vietnam	1,863	0,300,731	725 16
	TOTAL	84,686	01,411,090	1

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285	Country	Quantity (kg)	Value (HK\$)	Unit Value (HK\$/Kg)
500	China	129	338,160	2,621.40
	ladaaasia	44 331	28,808,381	649.85
	Indonesia	29 779	4,658,115	156.42
	Malaysia	23,775	147 000	6,125.00
	Macau	24	16 067 341	684.33
	Singapore	23,479	0 551 713	2 327.98
	Thailand	4,103	9,551,715	1 355 57
	USA	208	- 281,939	2,410,71
	Vietnam	2,232	7,612,695	5,410.71
	TOTAL	104,285	67,465,364	646.93

1986	Country	Quantity (kg)	Value (HK\$)	Unit Value (HK\$/kg)
	Burna	125	447,090	3,576.72
	China	3.270	149,075	45.59
	Indonesia	44.625	38,638,137	865.84
	Molaveia	38.368	7,242,513	186.76
	Magazi	5	5,600	1,120.00
	Singaporo	29.961	18,256,809	609.35
	Siligapore	15	18.800	1,253.33
	Solomon is.	2 884	12.815.444	4,443.64
	Taiwaa		29.000	4,833.33
	Violoam	1 282	4,794,389	3,739.77
		120 541	82,396,857	683.56
	IUIAL	120,011		1

1987	Country	Quantity (kg)	Value (HK\$)	Unit Value (HK\$/kg)
	Burma	290	1,143,230	3,942.17
	Canada	· 36	21,800	605.56
	China	2,977	839,092	281.86
	Indonesia	49,106	86,294,193	1,757.30
	Malaysia	43,066	11,181,785	259.64
	Singapore	53,423	40,200,062	752.49
	Thailand	8,176	14,946,231	1,828.06
	USA	23	23,000	1,000.00
	Vietnam	1,615	5,902,592	3,654.86
	TOTAL	158,712	160,551,985	1,011.59

Country	Quantity (kg)	Value (HK\$)	Unit Value (HK\$/kg)
Burma	218	1,325,454	6, 080.06
China	339	517,350	1,526.11
Indonesia	38,663	125,504,692	3,246.12
Malaysia	34,942	19,911,072	569.83
Singapore	76,672	56,953,818	742.82
Thailand	7,950	16,040,481	2,017.67
Taiwan	11	90,000	8,181.82
Vietnam	2,548	11,116,697	4,362.91
TOTAL	161,343	231,459,564	1,434.58

Country	Quantity (kg)	Value (HK\$)	Unit Value (HK\$/kg)
Burma	269	1,750,868	6,508.80
China	132	666,720	5,050.91
Indonesia	43,617	156,815,223	3,595.28
Malaysia	27,110	19,678,399	725.87
Singapore	70,424	62,898,573	893.14
Thailand	5,701	15,362,777	2,694.75
Taiwan	56	37,128	663.00
Vietnam	1,879 -	. 13,222,926	7,037.21
TOTAL	149,188	270,432,614	1,812.70
	Country Burma China Indonesia Malaysia Singapore Thailand Taiwan Vietnam TOTAL	Country Quantity (kg) Burma 269 China 132 Indonesia 43,617 Malaysia 27,110 Singapore 70,424 Thailand 5,701 Taiwan 56 Vietnam 1,879 TOTAL 149,188	Country Quantity (kg) Value (HK\$) Burma 269 1,750,868 China 132 666,720 Indonesia 43,617 156,815,223 Malaysia 27,110 19,678,399 Singapore 70,424 62,898,573 Thailand 5,701 15,362,777 Taiwan 56 37,128 Vietnam 1,879 13,222,926 TOTAL 149,188 270,432,614

90	Country	Quantity (kg)	Value (HK\$)	Unit Value (HK\$/kg)
Ì	Canada	185	307,804	1,663.81
	China	289	1,640,218	5,675.49
	Indonesia	62,864	221,767,879	3,527.74
	Malaysia	37,295	29,679,956	795.82
	Singapore	40,032	60,717,171	1,516.72
	Thailand	5,509	18,443,346	3,347.86
	USA	158	216,961	1,373.17
	Vietnam	3,283	25,885,527	7,884.72
	TOTAL	149,585	358,627,857	2,397.49

991	Country	Quantity (kg)	Value (HK\$)	Unit Value (HK\$/kg)
	Burma	332	2,615,954	7,879.38
	Indonesia	64,066	286,776,443	4,476.27
	Malaysia	17,531	29,641,311	1,690.79
	Singapore	48,948	85,575,445	1,748.29
	Thailand	. 5,534	20,391,013	3,684.68
	Vietnam	3,316	34,478,738	10,397.69
	TOTAL	139.727	459.478.904	3,288,40

Country	Quantity (kg)	Value (HK\$)	Unit Value (HK\$/kg)
Canada	22	46,000	2,090.91
China	123	303,000	2,463.41
Indonesia	64,452	297,161,000	4,610.58
Malaysia	11,330	25,547,000	2,254.81
Singapore	45,591	93,373,000	2,048.06
Thailand	6,782	20,942,000	3,087.88
USA	119	292,000	2,453.78
UK	256	18,000	70.31
Vietnam	4.737	40,775,000	8,607.77
TOTAL	133,412	478,457,000	3,586.31

Hong Kong's Annual Export of Edible Birds' Nest (1980-91)

1980	Country	Quantity (kg)	Value (HK\$)	Unit Value (HK\$/kg)
	United Arab Emirates	12	12,200	1,016.67
	Belgium	28	20,260	723.57
	Beliza	2	6,120	3,060.00
	Canada	948	324,044	341.82
	Switzerland	106	4,660	43.96
	China	306	137,698	449.99
	West Germany	119	49,597	416.7B
	W Indies, Fr & Netherlands	28	35,571	1,270.39
	France	368	124,278	339.55
	United Kingdom	48	23,550	490.63
	Ghana	11	6,820	620.00
	Japan	1,408	1,192,932	847.25
	Liberia	4	4,425	1,106.25
	Mexico	18	8,000	444.44
	Oceania Nes	810	392,457	484.53
	Philippines	492	79,800	162.20
	Panama	49	23,506	479.71
	Sabah	9	, 3,685	409.44
	Singapore	492	665,957	1,353.57
	Sarawak	210	33,520	159.62
	Thailand	560	132,875	237.28
	Trinidad & Tobago	182	68,272	375.12
	United States	10,525	4,164,991	395.72
	Yemen Arab Republic	5	2,493	498.60
	South Africa	7	5,950	850.00
	TOTAL	16,745	7,523,667	449.31

Country	Quantity (kg)	Value (HK\$)	Unit Value (HK\$/kg)
Canada	1,393	554,730	398.23
China	268	198,400	745.86
France	340	148,027	429.49
Linuted Kingdom	54	33,528	620.89
lanan	907	1,506,290	1,660.74
Mauritina	23	8,212	357.04
Macridus	32	17,150	535.94
Matico	5	2,876	575.20
	407	280,424	689.00
Philippines	1,481	344,411	235.74
Papama	21	10,800	514.29
Paris	0	3,252	361.34
Singeore	319	134,230	420.78
Theiland	206	50,589	245.58
Trialiand & Tobago	249	149,709	601.24
Inniuau a robago	8 804	4 188 292	470.9
05	14 508	7 628 820	523.0
TOTAL	14,588	7,628,920	52

Country	Quantity (kg)	Value (HK\$)	Unit Value (HK\$/kg)
Belgium	13	3,588	276.00
Canada	927	512,117	552.45
China	894	716,887	801.89
West Germany	119	41,440	348,24
Finland	45	28,975	643.89
France	217	145,690	671.38
United Kingdom	45	36,621	. 813.80
Japan	· 637	1,344,943	2,111.37
Mauritius	5	2,400	480.00
Netherlands	3	2,575	858.33
Oceania Nes	400	291,643	729.11
Philippines	784	150,640	192.14
Panama	42	29,827	710.17
Singapore	78	77,625	995.19
Solomon Islands	3	2,070	. 690.00
Thailand	92	23,000	250.00
Trinidad & Tobago	332	189,157	569.75
United States	13,357	4,365,160	326.81
Venezuela	22	28,946	1,315.73
South Africa	3	9,980	3,326.67
TOTAL	18,018	8,003,284	444,18

Country	Quantity (kg)	Value (HKS)	Unit Value (HK\$/kg)
Belgium	11	7,065	642.27
Canada	1,765	834,394	472.74
Switzerland	5	6,500	1,300.00
China	326	220,359	675.95
West Germany	. 9	4,920	548.67
Finland	3	13,800	4,600.00
France	126	96,224	763.68
United Kingdom	53	40,290	760.19
Japan	· 555	947,360	1,706.95
North Korea	8	53,800	5,977.78
South Korea	43	20,218	470.19
Mauritius	2	2,195	1,097.50
Malaysia West	163	63,710	390.86
Netherlands	11	7,700	700.00
Oceania Nes	429	333,465	777.31
Philippines	450	92,160	204.80
Panama	45	31,000	5 88.89
Peru	3	1,650	550.00
Singapore	367	282,015	768.43
Solomon Islands	3	2,000	668.67
Sarawak	62	11,862	191.32
Thailand	147	37,125	252.55
Trinidad & Tobago	339	239,220	705.66
United States	6,257	2,278,420	364,14
South Africa	6	7,150	1,191.67
TOTAL	11,189	5,634,602	503.58

Quantity (kg)	Value (HK\$)	Unit Value (HK\$/kg)
18	24,000	1,333.33
1.141	739,753	648.34
13	17,800	1,369.23
1 080	1.145.941	1,052.29
1,005	129 398	862.65
	24 600	1,447.08
	80.852	1.064.07
57	4.040,400	4 361.14
447	1,949,429	£ 170 17
12	98,150	1 071 4
7	7,500	1,071.45
365	357,175	¥/8.50
43	39,085	908.93
279	414,387	1,485.20
424	127,770	301.3
161	106,168	659.4
30	6,000	200.0
6	7,488	1,248.0
6,500	4,186,195	644.0
19	17,504	921.2
+0 779	9 458 995	877.6
	Quantity (kg)	Quantity (kg) Value (HK3) 18 24,000 1,141 739,753 13 17,800 1,089 1,145,941 150 129,398 17 24,600 57 60,652 447 1,949,429 12 98,150 7 7,500 365 357,175 43 39,085 279 414,387 424 127,770 161 106,168 30 6,000 6 7,488 6,500 4,186,195 19 17,504 10,778 9,458,995

Country	Quantity (kg)	Value (HKS)	Unit Value (HKS/kg)
Country	1.735	980,139	584.92
Duitzorland	13	14,662	1,127.85
Switzenand	794	1,106,222	1,393.23
	190	236,820	1,248.42
West Germany	3	15,600	5,200.00
Finiand	43	53,748	1,249.95
France		44,096	1,259.89
United Kingdom		2.544.114	2,783.99
Japan		1 056	1,058.00
Mauritius		175 278	789.53
Oceania Nes		18 110	1,293.57
Panama	14	15,110	1 057 48
Singapore	421	445,200	1 048 33
Solomon Islands	3	3,145	,,040.00 602.05
Thailand	625	377,470	003.80
Trinidad & Tobago	252	321,142	1,2/4.3/
Taiwan	118	23,200	200.00
United States	7,565	5,419,173	716.34
TOTAL	12,987	11,779,173	907.00

Country	Quantity (kg)	Value (HK\$)	Unit Value (HK\$/kg)
United Arab Emirates	1	1,455	1,455.00
Onited Man Enitates	1.817	892,158	491.01
Canada		15.512	1,410.18
Switzerland		1 118 108	1,102.87
China	1,012	14 424	120.20
West Germany	120		1.264.37
France	68	1/6,08	1 423 92
United Kingdom	75	106,794	2 402 20
Japan	927	3,153,934	3,402.30
South Korea	16	39,575	2,4/3.44
Manritius	4	1.418	354.50
Nathadanda	3	3,732	1,244.00
	402	467,594	1,163.17
Oceania Nes	11	13,480	1,225.45
ranama	428	621,400	1,451.87
Singapore		12,769	2,553.80
Solomon Islands		167.260	312.05
Thailand		470.050	1,217.75
Trinidad & Tobago	386	165 900	476.45
Taiwan	327	000,001	793 26
United States	6,158	4,884,884	1 328 80
South Africa	. 5	6,633	1,020.00
TOTAL	12,312	12,230,955	833.47

1987

1986

	Quantity (kg)	Value (HKS)	Unit Value (HK\$/kg)
Country	1	3,550	3,550.00
United Arab Emirates		4,808	96.16
Belgium		560 848	975.39
Canada	5/3	715 345	1,397.16
China	512	715,545	1.011.91
West Germany	294	297,502	712.83
United Kingdom	185	131,892	272.08
Israel	396	107,737	
Japan	763	3,919,638	5,137.14
North Korea	2	3,170	1,585.00
South Korea	34	121,833	3,583.32
Malausia Wort	18	22,560	1,253.33
Malaybia West	2	1,890	945.00
Maunuus	20	21,000	1,050.00
Mexico	24	3,989	168.21
Netherlands	209	352,149	1,181.71
Ocernia Nes	250	44 710	1,064.52
Panama	42	509 290	334.61
Singapore	1,788	598.700	220.00
Solomon Islands	15	3,300	200.42
Thailand	356	106,950	1 206 50
Trinidad & Tobago	68	94,968	1,396.58
Taiwan	1,350	2,328,190	1.724.59
Lipited States	6,399	8,248,640	976.11
TOTAL	13,192	15,690,947	1,189.4

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Country	· Quantity (kg)	Value (HK\$)	Unit Value (HK\$/kg)
United Arab Emirates	5	28,359	5,671.80
Canada	1,093	1,062,689	972.27
China	400	598,164	1,495.41
West Germany	690	310,814	450.48
France .	27	7,200	266.67
United Kingdom	12	- 38,483	3,208.92
Indonesia	· 899	250,000	278.09
Japan	869	4,914,510	5,655.38
South Korea	48	236,639	4,929.98
Lebanon	5	17,433	3,488.60
Malaysia West	2	19,400	9,700.00
Netherlands	40	10,710	267.75
Oceania Nes	159	251,559	1,582.13
Panama	12	31,340	2,611.87
Singapore	968	1,672,915	1,728.22
Sarawak	360	101,000	280.56
Thailand	158	110,550	699.68
Taiwan	1,232	3,317,460	2,692.74
JS Oceania	1	2,184	2,184.00
United States	5,863	8,930,577	1,523.21
FOTAL	12,843	21,911,986	1,708,14

1989 Country Quantity (kg) Unit Value (HKS/kg) Value (HK\$) United Arab Emirates 4 16,160 4,040.00 Belgium 6 18,463 3,077.17 Canada 956 1,397,545 1,461.87 China 293 1,022,590 3,490.07 West Germany 64 178,525 2,758.20 Finland 1 9,200 9,200.00 2,855.88 France 34 97,100 99,603 United Kingdom 34 2,929.50 Japan 1,162 6,607,875 5,686.64 North Korea 4 15,990 3,997.50 South Korea 3 9,261 3,087.00 Malaysia West 118 58,025 474.79 Netherlands 3 5,408 1,802.67 Oceania Nes 158 336,922 2,132.42 Panama 5 16,900 3,380.00 Singapora 907 953,631 1,051,41 Thailand 48 118,000 2,565.22 Trinidad & Tobago 10 8,000 800.008 Taiwan 1,462 1,347,581 921.74 US Oceania 4 9,711 2,427.75 United States 5,287 8,285,799 1,587.20 TOTAL 10,581 20,608,289 1,951.36

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Country	Quantity (kg)	Value (HKS)	Unit Value (HK\$/kg)
United Arab Emirates	1	3,245	3,245.00
Canada	371	2,086,732	5,624.61
China	2.724	3,220,476	1,182.26
West Germany	28	61,084	2,181.57
United Kingdom	21	88,648	4,126.10
Indonesia	27	251,100	9,300.00
Japan	1,157	9,565,009	8,267.08
South Korea	22	82,860	3,766.38
Malaysia West	2,801	1,244,513	444.31
Netherlands	140	15,560	111.14
Oceania Nes	16	41,228	2,576.75
Singapore	1,350	1,103,936	817.73
Trinidad & Tobago	44	47,352	1,076.18
Taiwan	386	1,066,601	2,783.22
US Oceania	2	9,535	4,757.50
United States	2,905	6,486,003	2,232.70
TOTAL	11,995	25,371,882	2,115.20

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Quantity (kg) Unit Value (HK\$/kg) Value (HKS) 1991 Country 6,850 3,425.00 United Arab Emirates 2 6,442.76 348 2,242,080 Canada 6,703 9,890,475 1,475.53 China 3,128.07 29 90,714 West Germany 21,375.00 42,750 2 West Indies, Fr & NI 92.31 130 12,000 France 1,187.64 79,572 United Kingdom 67 932.43 74 69,000 Indonesia 10,187.36 613 8,244,851 Japan 18,975.00 Kenya 3 56,925 4,291.12 North Korea 68 283,214 6,657.84 25 166,446 South Korea 445.95 Malaysia 2,684 1,196,933 108 19,095 180.14 Netherlands 39 147,500 3,782.05 Oceania Nes 36 18,500 513.89 Panama 2.027 4,952,851 2,443.44 Singapore 15,487 15,487.00 1 Tanzania 4,523.96 1,850,300 409 Taiwan 5,343.00 10,686 US Oceania 2 3.172.24 7,159,751 2.257 United States 23,088.00 115,440 Yemen 5 2,218.54 34,671,420 TOTAL 15,628

Quantity (kg)	Value (HKS)	Unit Value (HK\$/kg)
A A	20,000	5,000.00
	258 000	9,214.29
28	1 200,000	2 420.07
538	1,302,000	1 649 50
10,585	17,427,000	1,048.50
139	538,000	3,870.50
525	5,472,000	10,422.86
17	243,000	14,294.12
2	. 20,000	10,000.00
60	64,000	1,066.67
A	6.000	1,000.00
	385 000	424.94
800	200,000	100.00
200	20,000	7 500 00
4	30,000	7,500.00
836	1,668,000	1,992.82
118	296,000	2,508.47
14	48,000	3,428.57
914	3,108,000	3,400,44
14 876	30,903,000	2.077.37
	Quantity (kg) 4 28 538 10,585 139 525 177 2 60 6 0 6 200 4 8 388 118 118 14 914 14,876	Quantity (kg) Value (HK\$) 4 20,000 28 258,000 638 1,302,000 10,565 17,427,000 139 538,000 525 5,472,000 17 243,000 2 20,000 60 64,000 60 64,000 200 20,000 4 30,000 385,000 20,000 118 296,000 118 296,000 14 48,000 914 3,108,000

TABLE 7 Comparison of Import and Export Data (weight/kg)

Producing Countries

1.	Indonesia	Year	Recorded Export (kg)	HK Recorded Import (kg)	Difference (Quantity)	3DC Difference %
		1980	23,671	29,775	-6,104	-20.50%
		1981	33,999	35,802	-1,803	-5.04%
		1982	33,494	36,846	-3,352	-9.10%
		1983	35,259	33,727	1,532	4.54%
		1984	42,833	40,430	2,403	5.94%
		1985	59,165	44,331	14,834	33.46%
		1986	36,921	44,625	-7,704	-17.26%
		1987	55,353	49,106	6,247	12.72%
		1988	41,171	38,663	2,508	6.49%
		1989	-	43,617	-	-
		1990	-	62,864	-	-
		1991	-	64,066	-	-

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2.	Malaysia		Recorded	HK Recorded	Difference	Difference
		Year	Export (kg)	Import (kg)	(Quantity)	%
		1980	22,432.45	30,752	-8,320	-27.05%
		1981	21,739.98	30,658	-8,918	-29.09%
		1982	23,326.28	24,500	-1,174	-4.79%
		1983	27,264.50	28,281	-1,017	-3.59%
		1984	22,392.70	24,299	-1,906	-7.85%
		1985	27,619.99	29,779	-2,159	-7.25%
		1986	34,955.73	38,368	-3,412	-8.89%
		1987	37,170.14	43,066	-5,896	-13.69%
		1988	33,049.81	34,942	-1,892	-5.42%
		1989	26,753.25	27,110	-357	-1.32%
		1990	34,292.29	37,295	-3,003	-8.05%
		1991	-	17,531	-	-

3. Thailand

	Recorded	HK Recorded	Difference	Difference
Year	Export (kg)	Import (kg)	(Quantity)	%
1980	294	3,143	-2,849	-90.65%
1981	1,372	3,529	-2,157	-61.12%
1982	1,504	1,755	-251	-14.30%
1983	1,906	4,292	-2,386	-55.59%
1984	707	3,129	-2,422	-77.40%
1985	3,034	4,103	-1,069	-26.05%
1986	837	2,884	-2,047	-70.98%
1987	6,171	8,176	-2,005	-24.52%
1988	6,250	7,950	-1,700	-21.38%
1989	3,588	5,701	-2,113	-37.06%
1990	3,701	5,509	-1,808	-32.82%
1991	-	5,534	-	-

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4. Singapore			Recorded	HK Recorded	Difference (Outputity)	Difference
		Year	Export (kg)	Import (kg)	(Quantity)	
				40 401	-13 772	-31.73%
		1980	29,629	43,401	-10,772	04 4 004
		1981	33.096	43,650	-10,554	-24.18%
		1082	28.671	30,218	-1,547	-5.12%
		1002	18,319	11,465	6,854	59.78%
		1004	18 406	14,506	3,900	26.89%
		1904	20,400	23,479	-2,609	-11.11%
		1965	20,070	29,961	-4,969	-16.58%
		1986	24,332	53 423	-10.625	-19.89%
		1987	42,190	50,420	20 762	-40 1296
		1988	45,910	76,672	-30,702	
		1989	37,264	70,424	-33,160	-47.09%
		1990	35,621	40,032	-4,411	-11.02%
		1991	44,953	48,948	-3,995	-8.16%

Consuming Countries

5.	Japan	Year	Recorded Import (kg)	HK Recorded Export (kg)	Difference (Quantity)	%
					700	40 72%
		1980	708	1,408	-700	-49.1270
		1981	513	907	-394	-43.44%
		1982	465	· 637	-172	-27.00%
		1083	307	555	-248	-44.68%
		1084	414	447	-33	-7.38%
		100-	806	955	-149	-15.60%
		1086	633	927	-294	-31.72%
		1087	446	763	-317	-41.55%
		1007	393	869	-476	-54.78%
		1900	859	1,162	-303	-26.08%
		1909	1 1 1 9	1 157	-38	-3.28%
		1990	1,119		77	-12 56%
		1991	536	613	-//	-12.00%

6.	Taiwan	Year	Recorded Import (kg)		HK Recorded Export (kg)	(Quantity)	%
		1980	-		0	-	-
		1981	-		0	-	-
		1982	-		0	-	-
		1983		1	0	1	-
		1984		30	30	0	0.00%
		1985		80	116	-36	-31.03%
		1986		427	327	100	30.58%
		1987		391	1,350	-959	-71.04%
		1988		587	1,232	-645	-52.35%
		1080		236	1,462	-1,226	-83.86%
		4000		17	386	-369	-95.60%
		1990		234	409	-175	-42.79%

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Singapore Import and Export Data

	Registered	Import from	Total		
	Import	Indonesia	Import	Export	Balance
1980	-		-	39,244	-
1981	-	-	-	16,5 €9	-
1982	-	30,972	30,972	36,777	-5,805
1983	-		_	29,374	-
1984	-	22,168	22,168	27,805	-5,637
1985	-	26,569	26,569	32,625	-6,056
1986	2,993	23,192	26,185	36,670	-10,485
1987	5,727	29,713	35,440	49,319	-13,879
1988	6,957	24,852	31,809	59,059	-27,250
1989	5,095	•	5,095	51,397	-46,302
1990	5,343		5,343	46,985	-41,642
1991	2,811	•	2,811	54,944	-52,133

- Data unavailable

* Bird's Nest is not registered in Indonesia export since 1989

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Total Net Imports of Nests (weight/kg) of Major Importing Countries

Countries	1986	1987	1988	1989	1990	1991
Lipited States *	6.158	6.399	6,619	5,299	2,777	2,257
Canada **	1.078	1,120	1,158	· 927	486	395
lanan	3.541	1,205	6,510	6,944	3,447	2,213
Taiwan	504	1.567	1,811	2,224	1,418	2,095
Hong Kong	108,229	145,520	148,388	138,400	137,560	124,093
Singapore #	2,993	5,727	6,957	5,095	5,343	2,811
Total	122.606	161.638	171,443	158,889	151,031	133,864
10(4)	,					
Nest equivalents ##	15,325,706	20,204,728	21,430,416	19,861,166	18,878,875	16,733,000

• The USA does not keep records of imports. The figures are derived from summation of net export of nest from all available data including trade data from Hong Kong, Singapore, Malaysia and Indonesia – the last did not export any nests to USA during the period.

•• No data available – estimate based on Hong Kong exports to Canada being 17.5% of exports to USA. However, the figures for both USA and Canada may be seriously underestimated since Valli and Summers (1990a, 1990b) note imports of c. 30 tons to North America annually.

Official import figures of Singapore. (see Table 5)

Based on an average nest weight of 8.0g - see Appendix 1.

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TABLE 10 Protected Status of Swiftlets and Nests

[Protected Status				Nest Collection Allowed	
Country	Species	bird		nest		Under Permit	
		Yes	No	Yes	No		
China	C. fuciphaga		+				
Vietnam	C. luciphaga		+				
Thailand	C. luciphaga	+*		+*		+	
	C. maximus	+*		+*		+	
Philippines	C. luciphaga	+				+	
	C. maximus	+				+	
West Malaysia	C. fuciphaga	+	+	+			
	C. maxima	+	+	+			
Sabah	C. fuciphaga		+	+		+	
	C. maximus		+	+		+	
Sarawak	C. fuciphaga	+				· •	
	C. maximus	+				+	
Brunei	C. fuciphaga		+				
	C. maxim		+				
Indonesia	C. luciphaga		+*			+#	
	C. maximus		+*			+#	
Singapore	C. luciphaga	+			+		
	C. maximus	+			+		
Myanmar (Burma)	C. fuciphaga		+?			+	
	C. maxima		+?			+	
India	C. unicolor	+		+		+ (but never had any been issued)	
Sri Lanka	C. unicolor	+		+		Not allowed	
Laos	C. luciphaga?		+		+	not applicable	
	C. maximus?		+		+	not applicable	

* Protected only in National Park

According to the Department of Wildlife and National Parks (which in theory can issue the necessary permit), no permits were being issed for nest collection. In practice, however, the Forest Department issue permits for collection of swiftlet nests in forest reserves.



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FIGURE 3.





Quantity (tannes)



Japan and Taiwan 88 89 1973 74 Year + Taiwan Japan

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