ANNEX III

Search for **little** known,,, the caption also reveal the complexities of migration, and that assignation of migration on a spp level would be premature much more in need of within the such as requent

In additin, explains GROMS classification of migration in the column "migration". All information presented here is also displayed in the main Species Report Form (Annex II, p. 13)

Abfrageunknown, little, poor*, possibl*, field migration

. In part, this is due to the wide variety of migration behaviour patterns, even within one species. Therefore, completion, review and maintenance of a reference list of migratory taxa, including subspecies, is still a major task, often requiring additional research projects. While the GROMs will certainly not solve these research questions, it might help to stimulate and coordinate, and to pool the data in cooperation with expert groups, thereby completing, reviewing and maintaining the migratory species reference list.

Latein	Englisch	Migration	Lit_Bezug
Anseriformes - Anatid	ae		
Anas flavirostris	Speckled teal	partial	Southernmost breeding winter in more temperate regions, as far N as Uruguay, Paraguay and southern Brazil. Falkland Is and Andean populations chiefly sedentary, perhaps forced to descend to lower altitudes by adverse winter weather.
Histrionicus histrionicus	Harlequin duck	range extension	Not truly migratory; in winter disperses along sea coasts within breeding range. Some occur further S (e.g. Florida, Ryu Kyu Is and Hawaii). Several records in Europe, mostly N USSR and Britain, a few perhaps of Siberian origin.
Somateria fischeri	Spectacled eider	intercontinental	Winter quarters remain unfound but presumably in Bering Sea area, perhaps variable each year according to extension of pack ice. Exceptional outside normal range, with vagrants in SW Canada (British Columbia), SW USA (California), W Siberia (Kola) and N Norway.
Tadorna tadorna	Common shelduck	partial	Most northern and interior populations move southwards to winter at lower latitudes. Even within mainly sedentary populations (e.g. that of Britain and N Sea coasts), some spectacular gatherings at moulting sites performed, perhaps requiring extensive flights.
Apodiformes - Apodid	lae		
Apus acuticauda	Dark-rumped swift	intracontinental	Winter records from NW Thailand indicate short-distance migration, although birds concerned possibly represent an unknown population. Recorded from Bhutan in springs of 1996 and 1997; not recorded from Andaman Is, and some doubts surround origin of Nepalese record. May be summer visitor only to breeding zone.
Apus caffer	White-rumped swift	intercontinental	Migratory in northernmost and southernmost parts of range. Spanish population present early May to Aug-Oct, some recorded into early Dec, with autumn migration through Straits of Gibraltar mid-Aug to mid-Oct; S African population present Aug-May, mainly absent from S Cape and much reduced farther N within S breeding range Jun-Jul. Poorly understood wet-season movements into Sahel may be feature of N sub-Saharan populations. Otherwise resident. Migrates in flocks of up to 100. S African migrants may be transequatorial. Some degree of altitudinal migration in Natal. First record from rabia 1982, and seen at least once subsequently in Tihamah coastal plains, Saudi Arabia, in Mar 1989. Vagrant to Norway (May, Jun) and Finland (Nov).

Latein	Englisch	Migration	Lit_Bezug
Chaetura vauxi	Vaux's swift	intercontinental	Nominate race a migrant, present in far N of range May to mid-Sept, exceptionally late Mar on coast. Migrates through S California mid-Apr to early May, with weaker autumn passage peaking early Sept, though continuing to early Oct, migrants leaving the state by mid-Oct. Recorded SE Farallon Is, 42 km W of San Francisco, in similar numbers over 22 years, in spring 813 in early-late May, and in autumn 803 early Sept to late Oct. Recorded E to Louisiana and Florida Passage through NW Mexico Apr-May and mid-Sept to Oct; nominate race present C Mexico to W Honduras, mid-Sept to May. Incidence of wintering in California increasing, small flocks occurring mainly in S, though wintering as far as NW California not unknown .
Hirundapus caudacutus	White-throated needletail		Nominate race is a long-distance migrant. Himalayan race nudipes may be resident or perhaps just summer visitor; reported to appear and disappear at localities rather suddenly, making clear assessment of migratory status complicated. Nominate on Siberian breeding grounds mid-May to late Sept, L Baikal from second half of May to late Aug; summer visitor, Japan, Apr-Sept; migrates through China, Indochina, and to lesser extent E Thailand, Wallacea and New Guinea; recorded on passage and possibly as winter visitor through Wallacea: mid-Oct, Sangihe; Oct to early Apr, Lombok; late Sept, Oct and Jan, Flores; Oct, Timor; recorded from Aru in early Apr. Migrates through SE Asia Sept-Nov and winters in Australia Dec-Mar; many records of overshooting birds in New Zealand, Nov-Mar. Recorded from Cape York Peninsula, N Australia, with Apus pacificus in Jul, presumably non-breeding birds. In spring, recently recorded for first time on Hainan, Apr; migrates through Hong Kong mid-Mar to early May, SE Asia as late as May, and NE China in May. Vagrant to Aleutian Is (4 records, May), Seychelles, and W & N Europe, with British and Irish records Apr-Jul and Nov; also one Nov record from Malta.
Hirundapus cochinchinensis	Silver-backed needletail		Poorly understood. Occurs in Malaysia late Sept to mid-Apr, with presumed migration through SE Asia and Spet-Oct; collected at night from Fraser's Hill, W Malaysia, between late Oct and early Dec. Flocks of 20 on passgae Bintan, Riau Archipelago, Strait of Malacca, late Nov, and 50-60 at lower Ketahun R, Sumatra, early Oct. Spring migration through Hong Konk late Mar to mid-May, with records fom Vietnam in May.
Streptoprocne biscutata	Biscutate swift	intracontinental	Not fully understood. Breeding areas of Serido roosting population (seridoensis) undicovered. Nominate race arrives Minas Gerais from Aug, with some still present Feb, but wintering grounds unknown ; possibly transequatorial migrant.
Caprimulgiformes Caprimulgidae Caprimulgus carolinensis	Chuck-will's- widow	intercontinental	Migratory, males generally moving before females. Begins arriving in N parts of range by mid-late Mar. Occasionally found N of normal breeding range, and perhaps also occurs N and West Indies to N South America. Vagrants recorded on St Martin, St Berthélemy and Barbuda. Adults tend to winter in Greater Antilles, immatures in Central & South America.
Caprimulgus climacurus	Long-tailed nightjar		Poorly known. Nominate race migratory and partially sedentary, some populations moving S after breeding season. Race sclateri possibly sedentary and partially migratory. Race nigricans probably sedentary. Outside breeding season, range also includes S Ivory Coast, SW Nigeria, S Cameroon, Equatorial Guinea, Gabon, SE Congo (lower Congo river valley), NE Angola (one record Luaco), SE Sudan, SW Ethiopia, W Kenya (sporadic in Turkana and Pokot region) and E Uganda.
Caprimulgus europaeus	European nightjar		Highly migratory. Nominate race leaves breeding grounds late Jul to Nov (mainly late Aug to Oct), W populations moving S on Broad front through Middle East (mid-Aug to early Dec) and E Africa. Winters mainly in E & S Africa, although small numbers may winter in W Africa. In spring, returning birds move N or NE, Mar-Jun, generally returning to breeding grounds Apr-May. Race meridionalis moves S on broad front across Mediterranean, N parts of Middle East and N Africa, and winters mainly in S and perhaps C Africa, though small numbers may winter in W Africa. Return movements probably at same time as nominate race. Race sarudnyi possibly winters mainly in E & SE Africa. In spring, moves NE through Arabian Peninsula, perhaps late Feb to May. Race unwini leaves breeding grounds possibly Aug-Sept and moves SE on broad front across Middle-East; winters mainly in E & SE Africa, although small numbers occasionally overwinter in Israel, Pakistan and possibly NW India. Return route in spring apparently farther N. After breeding, race plumipes moves SW on broad front and winters mainly in SE Africa. Race dementievi probably also winters in E & SE Africa. Vagrants recorded in Iceland, Faeroes, Azores, Madeira, Canary Is and Seychelles.
Caprimulgus indicus	Jungle nightjar	partial	Poorly understood. Throughout much of range from India E to S China, populations largely sednetary or locally migratory, some movements possibly altitudinal only. Races kelaarti in Sri Lanka and phalaena on Palau Is probably sedentary. Race jotaka highly migratory: leaves breeding grounds Sept-Nov, moves S through E China, and possibly across South China Sea, to winter from S China, Indochina and Malaysia to Sumatra, Java, Borneo and Philippines. Japanese population possibly moves across Sea of Japan rather than East China Sea. Return migration probably Mar-May. Vagrants possibly of migratory race jotaka. recorded in N Moluccas (Halmahera

Latein	Englisch	Migration	Lit_Bezug
			Is), NW New Guinea (Maokwari, Irian Jaya) and Aleutian Is (Buldir Is).
Caprimulgus macrurus	Large-tailed nightjar	partial	Poorly documented. Most populations appear to be mainly sedentary. Race albonotatus sedentary and partially migratory, e.g. summer breeding visitor to Pakistan, arriving from mid-late Mar and leaving again in Sept, when probably moves E. In other parts of range, less frequent Oct-Feb and may be subject to some local movements. Race schlegelii generally sedentary, but may undertake local movements in parts of range. In Australia, possibly occurs as a vagrant as far S as Queensland/New South Wales border.
Caprimulgus mahrattensis	Sykes's nightjar	partial	Poorly known. Sedentary and partially migratory. After breeding season, disperses widely and winters throughout W & C India, where recorded from Rajasthan, Kutch, N Gujarat, Saurashtra, W Kandesh, Deccan and Konkan S to N Mysore.
Caprimulgus nubicus	Nubian nightjar	partial	Poorly known. Nominate race probably sedentary. Middle Eastern race tamaricis possibly sedentary and partially migratory. Some may move SW during Oct-Nov to winter in coastal lowlands of NE Sudan, eritrea, Djibouti and NW Somalia. Autumn vagrants also recorded NE Saudi Arabia and Oman (Mainly Oct). Return movements in spring noted mid-Feb to late May (mainly Mar-Apr) in Israel. Race torridus possibly sedentary and partially migratory. Socotran race jonesi probably sedentary.
Caprimulgus ruficollis	Red-necked nightjar	intercontinental	Migratory. Nominate race leaves breeding grounds by late Oct or Nov. Regular autumn migrant through Gibraltar, along coast of Morocco and across NW Africa (e.g. W & C Mauretania Oct-Nov). Some may winter in Morocco (e.g. Chichaoua Dee-Jan) but usually winters farther S in W Africa, though exact range unclear. Recorded N Senegal late Nov and Jan, and C & S Mali Oct-Mar, where common and widespread. In spring, return movements on broad front (Mar to early May) across Mauretania, Western Sahara, Morocco and W Algeria, returning to breeding grounds from late Apr to May. Race desertorum migratory and partially sedentary; movements and wintering range probably similar to nominate race. Recorded N Senegal late Nov, E Gambia Nov, and Mali, Ivory Coast and N Ghana (Gambaga) Mar. Winter records (race unknown) also from Liberia in Dec and Ivory Coast in Nov and Jan. Vagrants recorded in Britain, Denmark, Ibiza, Sicily, Malta, Libya and Madeira and possibly Yugoslavia, Turkey and Canary Is; single record from France during present century, a bird found dead at Bouches-du-Rhône in Jun 1997.
Caprimulgus vociferus	Whip-poor-will	partial	Nominate race migratory, arriving on S breeding grounds by late Mar and on N by early May. Possibly casual visitor to SW & C Canada and accidental to SE Alaska. Probably departs from breeding grounds Sept-Nov and winters in lowlands of South Carolina and Gulf States, S through E Mexico (Sept-Apr) to Guatemala, S Belize, El Salvador and Honduras. Also a casual winter visitor in S California, W Cuba, Jamaica, Costa Rica (perhaps rare on Pacific slope mid-Nov to late Mar) and W Panama (possibly 2 records, W Chiriqui), and occasionally winters along E coast of USA as far N as New Jersey. Race arizone migratory, arriving on breeding grounds by late Apr and departing again by late Sept, though perhaps only an altitudinal migrant in parts of Mexican range. Casual visitor to Baja California. Generally winters in C Mexico. Other populations may be largely sedentary.
Chordeiles acutipennis	Lesser nighthawk	partial	Surprinsingly little known; many populations possibly largely sedentary. Race texensis migratory, wintering from extreme S Baja California and C & S Mexico, S to Panama (Oct-Apr) and NW Columbia (Dec-Apr); occasionally also winters in S California and SW Arizona. Race micromeris also migratory, moving S through Central America and possibly across Gulf of Honduras; winters in Costa Rica and W Panama, possibly E to Canal Zone. S populations in South America possibly also migratory, moving N during austral winter. Often migrates in loose flocks, occasionally in large numbers. Vagrants have occured in Ontario, Alabama, Florida, Bermuda and Trinidad.
Chordeiles minor	Common nighthawk	intercontinental	Highly migratory, breeding throughout North & Central America and wintering in South America, possibly as far S as N Patagonia. Migrates in loose flocks, large numbers often passing along favoured routes. Nominate race leaves breeding grounds late Jul to early Oct (mainly mid-Aug to early Sept), generally moving S through Central America, although some E populations may use transoceanic routes, as regular and occasionally very common autumn migrant on Bermuda. Winters in South America E of Andes, as far S as N Argentina. In spring, returning birds arrive on breeding grounds late Apr to late May (mainly middle to late May). After breeding season, race sennetti moves S through Colorado, Texas and Oklahoma, then possibly through E side of Central America. Race hesperis moves S through SW USA and Central America, although occasionally recorded E of normal routes. Race henyri moves SE through Central America, and possibly across Gulf of Mexico. Race howelli moves S through CS USA, Mexico and Nicaragua. Race chapmani possibly moves SE and winters from C Brazil to N Argentina. Race neotropicalis leaves breeding grounds in Aug and probably Sept. In spring, returning birds may begin arriving in Jan, though most not until Mar-May. Race aserriensis moves SE through Central America. Movements of race panamensis poorly documented. Vagrants have occured in autumn in Iceland, Faeroes, Britain (mid-Sept

Latein	Englisch	Migration	Lit_Bezug
			to late Oct), at sea near Azores, and on Tristan da Cunha (late Nov).
Eurostopodus argus	Spotted nightjar	partial	Sedentary and locally nomadic in N, migratory and partially sendentary in S. Some S populations leave breeding grounds Mar (perhaps) to May, move N through C Australia (Mainly May-Jun) and winter across N Australia from May to probably Sept. Overshooting and wintering birds also occur on islands in Banda Sea and nearby: Romang (Jul), Barbar Is (Aug-Sept) and Aru Is (Apr-Sept). Return migration through C Australia Aug-Oct. N populations apparently move to well-drained, sparsely grassed hills and ridges during wet season (Nov-Mar) and return lower-lying plains during dry season. Records from New Ireland in Bismarck Sea require further investigation. During migrations, often forms loose flocks of 10-15 birds.
Macrodipteryx longipennis	Standart-winged nightjar	intracontinental	An intra-African migrant, movements protracted and possibly influenced by rains, not fully understood. Leaves breeding grounds in southern savannas of W & C Africa from mid-Apr to about Aug and moves N to spend wet season in savannas of Sahel and Sudan. E populations move E or NE from Apr. Occurs possibly Aug-Dec in S Mauretania, N Senegal, C Mali, S Niger, N Nigeria and C Chad (N to Ennedi Mts). Also recorded in C & SE Sudan (perhaps mid-Apr to Sept) and W Ethiopia (up to Jan), Uganda and W Kenya. Return movements poorly known. Protable vagrants recorded in W Kenya and N Somalia.
Phalaenoptilus nuttallii	Common poorwill	partial	Well known for habit of hibernation during cold weather (see page 309). Nominate race in part sedentary and in part migratory. N populations leave breeding grounds late Sept to Nov (N birds departing earlier than S) and move S to winter throughout S parts of range from SE California and S Texas to C Mexico; S limit of wintering range poorly known. Return to breeding grounds Feb-Mar (late Apr to mid-May farther N). Race californicus also migratory in N of range and sedentary in S. Other races generally sedentary, although some populations of race adustus may undertake altitudinal movements outside breeding season. Possible vagrant recorded in Florida.
Charadriiformes Alcidae Aethia pygmaea	Whiskered auklet	intracontinental	Distribution and movements outside breeding season poorly known. Returns to colonies Apr to early May, with reproduction complete by mid-Aug, and most birds gone by early Sept. Most birds probably remain near-shore close to breeding areas (e.g. Aleutians), others possibly undergo local movements to adjacent seas (e.g. some Kuril birds to S Japan). Often concentrated in large flocks in winter, presumably at food-rich locations, particularly in E Aleutians.
Brachyramphus marmoratus	Marbled murrelet	intraoceanic	seasonal post-breeding movements poorly known. Most birds move from exposed coasts into sheltered productive inshore waters, usually near breeding area, where they often occur in large aggregations. Russian population appears more migratory, most migrate S to Japan.
Charadrius montanus	Mountain plover	intracontinental	Migratory. On breeding grounds, flocks form from mid-Jun onwards; present in inland wintering areas chiefly from early Nov to mid-Mar; main wintering area is Central Valley of California; arrives in flocks on breeding grounds in Colorado by late Mar to Apr, probably after non-stop flight from wintering areas; migratory routes unknown .
Charadriiformes Haematopidae Haematopus longirostris	Pied oystercatcher	range extension	Form non-breeding flocks, but no major movements recorded; may breed throughout range. Status in S New Guinea uncertain; may be only non-breeding visitor, but, if so, origin of such birds unknown .
Charadriiformes Laridae <i>Rissa brevirostris</i>	Red-legged kittiwake	interoceanic	Little studied. Birds move S in winter, some keeping just ahead of advancing ice, others dispersing widely over ocean. Many presumably leave Bering Sea, most probably spread over N Pacific E as far as Gulf of Alaska, where recorded in winter; several have been seen S to N Japan.
Sterna aleutica	Aleutian tern	intercontinental	Little information. Arrives in breeding areas mid-May and leaves by mid-Sept. Non-breeders presumably pelagic, dispersing into Bering Sea and N Pacific. No Neartic records outside Alaska, and only accidental in Commander Is and Japan. Winter records from Philippines, and recorded as migrant Hong Kong, but main wintering areas still unknown . One extraordinary record of vagrancy: an adult in Britain in May 1979.
Sterna bergii	Great crested tern	partial	Movement patterns mostly unknown , and many populations more or less resident around breeding areas. Australian birds disperse several hundred kilometres around colony. Race velox disperses mainly within its breeding range, but Biddle East birds move S to E African coast after breeding, and winter mainly from Egypt to Kenya, overlapping with thalassinus. Non-breeding birds of nominate race overlap with enigma.

Latein	Englisch	Migration	Lit_Bezug
Sterna superciliaris	Yellow-billed tern	local migrant	Unknown. Main movement is apparently along river valleys to coasts, where non-breeders congregate.
Charadriiformes Rynchopidae <i>Rynchops</i> <i>niger</i>	Black skimmer	intercontinental	Migratory. Northernmost breeding zones vacated Nov-Mar, birds wintering scantily S from North Carolina, and in greater number S from South Carolina to Florida, and down Gulf coast and both coasts of Mexico to Panama; sometimes carried far afield by storms, e.g. to Newfoundland, inland USA and Mexico, West Indies and Venezuela. Non-breeding cinerascens arrive in Chile in Oct, leaving in May; present in Trinidad May-Nov. Non-breeding intercedens on coast and estaries mainly Dec-May, but poorly documented.
Charadriiformes Scolopacidae Calidris canutus	Red knot	intercontinental	Long distance migrant, with relatively few stopover sites. Race islandica, from Canada and W Greenland, crosses Greenland icecap, N Atlantic, often Iceland (probably not used by birds from Greenland), to NW Europe; some move down SW Norway and Denmark, mainly juveniles, only in autumn; spring migration more synchronized, passing through Iceland and N Norway. Race canutus probably has 3 migration routes: birds from Yaktia perhaps move overland to Gulf of Finland, through Baltic and W Europe to W Africa (mainly Banc d'Arguin, Mauretania) and S Africa; Taymyr population presumably halts in W Europe; N migration of both groups along same route, many also stopping over in W France; birds from New Siberian Is pobably move down E coast of Asia to Australasia. Most rufa cross W Atlantic from NE North America to coast of the Guianas, whereafter most continue to Patagonia and Tierra del Fuego; birds wintering in Florida traditionally ascribed to this race, but probably referable to roselaari; on way N, most birds stage at Delaware Bay. Race rogersi may perform loop migration to Australasia, moving S non-stop across W Pacific, via Sea of Okhotsk, and down E Asian coast (Shanghai and Korea); arrives in N Australia from late Aug, in New Zealand arrives from late Sept and departs late Mar to early Apr; possibly flies non-stop from NW & SE Australia to SE China. Migration route of roselaari not clear, but assumed to winter in W Florida, S Panama and N Venezuela. Adults depart breeding grounds before young. Degree of site fidelity to wintering grounds unclear. Many immatures remain in winter quarters all year.
Charadriiformes Stercocariidae Stercorarius maccormicki	South Polar skua	intercontinental	Transequatorial migrant, departing from breeding grounds in Mar and returning Oct-Nov. Many Northern Hemisphere specimens are of immature birds, as far north as Greenland, Japan and British Columbia. Wintering areas thought to be throughout North Pacific and North Atlantic, perhaps with clockwise loop migrations. Commonest Catharacta in May-Aug on Grand Banks of Newfoundland. Records from E North Atlantic few, and confused by presence of C. skua.
Ciconiiformes Ardeidae Egretta picata	Pied heron	partial	Pooryl known. In Australia, sedentary with some erratic movements; regular non-breeding visitor to Innisfail (Queensland) in Oct-Feb. Part of population performs post-breeding dispersal or migration to Indonesia and New Guinea during Australian dry season between Mar/May and Dec/Feb. Occasional in SE Australia, during flood years; accidental to S Borneo.
Egretta thula	Snowy egret	partial	Migratory in USA, with marked post-breeding dispersal; winters along Gulf coast, in Florida, Caribbean, C America and N South America; some birds remain on Atlantic coast of USA, N to New Jersey; W birds winter in Mexico. Little known about movements of S populations of S America, but some evidence suggesting post-breeding dispersal; increasingly frequent records from Tristan da Cunha (S Atlantic) may indicate some true migration. Accidental to Canada, Alaska, Bermuda and Azores.
Gorsachius leuconotus	White-backed night-heron	range extension	Very little known. Appears to perform seasonal movements related with onset of rains, but more evidence required.
Gorsachius magnificus	White-eared night-heron	intracontinental	Little known. The few data available suggest that N populatin moves S in Oct to winter in Hainan (S china); no evidence of wintering further S. Vagrant to N Viet Nam.
Gorsachius melanolophus	Malayan night- heron	partial	Little known. Partial migrant: population of SW India apparently migrates in Oct/Nov to Sri Lanka; birds from N India and Burma move S in Aug-Oct, probably wintering in Malay Peninsula and Greater Sundas, where may be joined by birds from Thailand and Indochina which are absent from breeding areas between Oct and spring; passage through Maly Peninsula note in Oct-Dec and APr; wintering birds in Sumatra Nov-May. Post-breeding dispersal of E populatinos to Taiwan and Ryukyu Is, where species overlaps with wintering G. goisagi, as in Philippines, where present species sedentary. vagrant to Shikoku Is (Japan), Palau Is, Banggai Is (off NE Sulawesi) and Christmas I (Indian Ocean)
Mesophoyx intermedia	Intermediate egret	partial	Mainly sedentary with some nomadic movements; extensive post-breeding dispersal. N populations of nominate race migratory: birds leave Japan in Sept/Oct to winter in Philippines and SE Asia, returning to colonies in Apr; often some birds overshoot and reach SE

Latein	Englisch	Migration	Lit_Bezug
			USSR or North Korea. Australien birds apparently sedentary, but great variations in numbers suggesting significant dispersal or perhaps migration, e.g. 1 bird ringed in Victoria recovered in Irian Jaya (W New Guinea), and possible movements N-S along central York Peninsula. In Africa mainly sedentary, although some evidence of possible migration, e.g. 1 bird ringed in South Africa recovered in Zambia, and species is seasonal visitor to Sierra Leone and S Nigeria. Accidental to Cape Verde Is, C Asia, New Zealand and Marion I (S Indian Ocean).
Ciconiiformes Ciconiidae Ciconia stormi	Storm's stork	data deficient	Unknown, possibly only irregular visitor to Malaysia.
Mycteria cinerea	Milky stork	range extension	Very little known. Some seasonal movements are probable outside the breeding season; Sumatran breeders seem to disperse along coast, with some crossing the Sunda Straits in Sep to Java or maybe even further afield; return in Apr. Vagrant to Bali and Sumbawa, C Indonesia. Javan colony of Pulau Rambut probably visited irregularly by varying numbers throughout year. If necessary, breeders may commute over large distances.
Mycteria leucocephala	Painted stork	local migrant	Resident with some local movements. After breeding, birds disperse in search of optimum feeding conditions. In recent years, in Thailand, flocks of 52 and 110 birds seen, in addition to regular small groups; may indicate dispersal from hitherto unknown colonies in Burma. Some birds also migrate to W Burma. Vagrant to Peninsular Malaysia.
Ciconiiformes Threskiornithidae <i>Threskiornis aethiopicus</i>	Sacred ibis	partial	Nomadic or migratory. Movements of several hundred kilometres to breed during rains; birds N of equator move northwards, those S of equator southwards, both returning at end of rains or early in dry season. Birds captured in Angola and Zambia had been ringed 1000-1500 to S in South Africa. Little information available on Iraqi population; present all year round, though not necessarily sedentary; small numbers winters in Iran. Stragglers recorded in Kuwait and N Yemen.
Columbiformes Columbidae Oena capensis	Namqua dove	partial	Some polulations sedentary, but there are seasonal and perhaps even nomadic movements in some areas. Some populations are highly migratory: populations of Israel, some of Arabia and probably those of SE Egypt mostly move S to winter; in Israel, arrives mid-Mar, most birds moving S to winter in Sep - Oct. Nomadic in Nigeria and elsewhere in W Africa, where present throughout most of year in Sahel, but migrates S to breed in Sept - Apr; in Sudan most birds move N to breed during rainy season. Populations of Zanzibar make daily trips to mainland during dry season. Vagrant to Sierra Leone, Burundi, Canary Is, Jordan, E Arabian Peninsula, and doubtfully Syria.
Streptopelia orientalis	Oriental turtle- dove	partial	Populations of N Asia from Siberia to Japan and Kuril Is migrate S to winter in S &E Asia from India to S &E China and S Japan. Generally resident in S Asia, but some populations are migratory; Himalayan and other N Indian populations migrate S to Peninsular India to overwinter. Winter range poorly known, partly due to complications of subspecific identification.
Columbiformes Pteroclididae Pterocles indicus	Painted sandgrouse	nomadising	Sedentary, perhaps locally nomadic. Tends to concentrate in some areas near the end of the rains.
Pterocles senegallus	Spotted sandgrouse	nomadising	Perhaps mostly sedentary and nomadic; wintering reported for areas of Morocco and Algeria (Oct - Mar) and also Pakistan and NW India.
Coraciiformes Alcedinidae Halcyon leucocephala	Grey-headed kingfisher	partial	Populations in Cape Verde Islands are resident, and so perhaps are some in equatorial Africa. In Arabia the Grey-headed Kingfisher is a breeding summer visitor in about April-November, and it is a well-defined migrant at higher latitudes in Africa. Its movements in West Africa are probably representative. There its breeding range is from derived savannas near the coastal forests (nesting in January and February, the dry-season) north to the desert-edge sahel zone (nesting in July and August, the wet season, north to 15°N in Mali and 15,5°N in Chad). In derived savannas it is exclusively a dry-season visitor and it migrates north for the wet season, whereas in sahel savannas it is exclusively a wet-season visitor, moving south for the dry season; whether pairs nest twice a year, in January in the south and July in the north, is unknown . Individuals breeding in middle latitudes have an unusual three-stage migration: they nest about March-June and then evidently move to the far north, where they moult in the rainy season, then migrate to the far south for the dry season, and finally return a short distance back north to their breeding latitudes (Nigeria: Skinner 1968, Elgood et al. 1973). Greyheaded Kingfishers visit Zimbabwe from early September to early May and Natal in August-April.

Latein	Englisch	Migration	Lit_Bezug
Coraciiformes Meropidae <i>Merops gularis</i>	Black bee-eater	partial	Mainly resident and sedentary, but in Sierra Leone and Liberia, also perhaps in Ivory Coast, Black Bee-eaters seem to move between coactal districts and the interior, withdrawing from the coast at the height of the rains in May-August and appearing on Mt Nimba (Liberia) only at that season to breed. Near Bo, Sierra Leone, they are present only in February-May. On Mt Nimba they occur all year but are scarce in November and December and common in February, when numerous flocks of up to 30 birds cross mountain ridges, flying westward.
Merops orientalis	Little green bee- eater	partial	Little Green Bee-eaters are resident and partially migrant in Africa, occuring at the southernmost fringes of their range only in the dry season (October-April) and being commonest at the northern fringes in the Sahara in the wet season (June-August). They are mainly resident in Jordan and Israel, and occur at Wadi Sawawin in northwest Saudi Arabia only in November-January. Although resident in Oman, they are commoner in winter than in summer, and some probably migrate over the Gulf. In India as in Africa this bee-eater is partially migrant, withdrawing from the north in winter and from areas of heaviest rainfall during the monsoon; it is subject to some altitudinal movement. Seasonal changes in abundance have also been noted in Pakistan, Nepal and Thailand.
Merops pusillus	Little bee-eater	partial	From all parts of its range come reports of seasonal changes in abundance, and in places this bee-eater seems to be entirely absent at one time of year but plentiful at another. No overall picture of long-distance migration emerges, however, and most of the reports probably refer to local movements, of up to 100 km perhaps , as the land dries out and birds concentrate in such areas as stay wet.
Cuculiformes Cuculidae Centropus bengalensis	African black coucal	nomadising	Resident. Perhaps only a summer visitor locally, e.g. in Nepal.
Clamator coromandus	Chestnut-winged cuckoo	partial	Seasonal in summer in China, Nepal and N Myanmar, where it arrives May and departs Oct; probably also only breeding visitor to N & C Thailand, wintering in peninsular Thailand and farther S; migrant in Malaysia. Resident in N India, S Vietnam and perhaps other parts of Indochina, and on Hainan; winters in C & S India, Sri Lanka, Malay Peninsula, Sumatra, Java and Borneo, occasionally to Bangka, N Sulawesi and the Philippines. Vagrant in Japan and Hong Kong.
Clamator jacobinus	Jacobin cuckoo	partial	An intra-African migrant in N and S, arriving on breeding grounds with rains and abundance of caterpillars. In far W Africa, breeds in Mauritania and migrates to Senegal and Gambia, where recent records are all in Nov-Dec; in Mali, present May-Oct; in Togo and Nigeria mainly seasonal, in N in Apr-Sept and in S in dry season; in savanna and forest edge in Gabon, juveniles appear as rare migrants in Dec. In E Africa a diurnal migrant, observed to move NW over Serengeti Plains in Feb-Mar. In S Africa, appears in E Cape in late Oct; moves towards more equatorial woodlands for dry season. Black morph serratus appears in austral winter N to Kenya, Ethiopia, Sudan and Chad, occasionally wanders to W Africa. Seasonal with the rains in India, occurring NE India May -Sept and disappearing early in dry season; present in C Myanmar May to early Nov. Nominate jacobinus from India winters in E and C Africa. Race pica nearly unknown in winter in Asia (one record Nepal), migrates to Africa, where not distinguishable from African pica: most Asian migrants move across Arabian Sea and Indian Ocean; more than 20 records in Oman and S Arabia, mainly in migration season; also observed on Seychelles during migration period.
Coccyzus cinereus	Ash-coloured cuckoo	intracontinental	Unknown; suspected seasonal austral migrant, perhaps migratory in extreme S. Records from E Peru, and possibly also from Colombia, indicate possible migratory movements or perhaps vagrancy.
Cuculus canorus	Eurasian cuckoo	intercontinental	Migratory in N of range, arriving in SW Britain mainly Apr - May, when occasionally recorded in small parties, and even in one flock of 50+ birds; also seasonal in hill country from Assam and Chin Hills to Shan States, where present Mar - Aug. Resident in tropical lowland areas of S Asia. Winter resident in sub-Saharan Africa and in Sri Lanka. W Palearctic populations migrate to Africa, where a Dutch-ringed juvenile found in Togo in Oct and a British-ringed juvenile found in Camaroon in Jan; migrants appear in N Senegal as early as late Jul through Oct; in W Africa nearly all records are in autumn (Sept - Dec), birds apparently continuing on to C & S Africa. Race bangsi occurs on passage in W Africa, and winters S of equator from W Africa to L Tanganyika. Asian populations of nominate canorus and bakeri winter in India, SE Asia and Philippines, also in Africa, but the extent of migration of Asian birds to Africa is unknown; some subtelephonus migrate through Middle East and occur in winter from Uganda and E Zaire to Zimbabwe, Mozambique and Natal. Mainly a passage migrant in Middle East, though some breed in region. Migrants also appear on islands in W Indian Ocean (Seychelles, Aldabra). Nominate canorus accidental in Iceland, Faeroes, Azores, Madeira, Canary Is and Cape Verde Is, rarely also Alaska and eastern N America; one record of canorus in Indonesia, off W Java in winter.

Latein	Englisch	Migration	Lit_Bezug
Cuculus clamosus	Black cuckoo	partial	Race gabonensis is sedentary in forests in W & C Africa. Race clamosus is migratory in S Africa, where it sings and is present mainly Sept - Dec but also remains until Mar; migrates to equatorial and W Africa N of the forest zone, where may breed irregularly; present mainly Mar - Nov in Sierra Leone, where race gabonensis unknown ; occurs in all months locally in E Africa.
Cuculus pallidus	Pallid cuckoo	partial	Resident, migratory, or with erratic movements in most of Australia, where many birds overwinter. In N Australia occurs in all months, but little breeding; in drier parts of Australia mainly a wet-season visitor. In SW Western Australia, adults arrive Jun and depart Nov; juveniles may remain with foster parents until Feb. Migratory movements are seen along coastal E Australia, in the Murray-Darling region, and at Murphy's Creek. Non-breeding birds occur during the austral winter in the Moluccas and Lesser Sundas (Flores, Timor), and occasionally in New Guinea. Movements and the distribution of wintering birds through Australia N of 20°S, the reporting rates in summer and winter N of South Australia, and the limited range of cuckoos elsewhere suggest that most birds remain in Australia and move within the continent. In Tasmania, occurs only in the breeding season.
Cuculus poliocephalus	Asian lesser cuckoo	intercontinental	Migratory, entire breeding population apparently moving SW or S to wintering grounds. Winters in peninsular India, Sri Lanka and also in E Africa; occurs in Seychelles on autumn (Nov) and spring (Apr) passage. Almost unknown in Thailand, where only three specimens known (all from N in May). Present in Kenya Nov - Apr: one ringed in coastal Kenya in Nov recovered inland in Kenya in Dec; birds in Apr clearly departing migrants, as they are fat and silent.
Cuculus solitarius	Red-chested cuckoo	partial	Intra-African migrant. Migratory in S part of range, arriving in Malawi and S Africa in Sept and leaving in Mar; perhaps migratory in W Africa, especially Nigeria, where it moves from coastal areas during rains to the N savannas.
Guira guira	Guira cockoo	non migratory	Resident. A vagrant (or escaped captive?) was found emaciated in Curacao, though species unknown on the nearest mainland in Venezuela and Colombia.
Falconiformes Accipitridae Accipiter chilensis	Chilean hawk	partial	Part of population migrates to NW Argentina, perhaps following northbound migratory passerines. Limits of transition betweejn migratory and resident populations not known.
Accipiter poliogaster	Grey-bellied goshawk	partial	Thought to be migratory, at least in extreme S of range. Colombian records may all refer to austral migrants, as all during period Mar-Jun. Transition between presumed migratory and resident populations unknown .
Aquila pomarina	Lesser spotted eagle	intercontinental	Migratory; highly dependent on soaring and thus thermals, avoiding large bodies of water. C European birds leave around mid-Sept; European birds migrate over Bosporus, Israel and Suez, where well studied, but migration in Africa little understood. A satellite-tracked juvenile covered 6000 km from Latvia to Sudan in barely a month, remaining there for over 6 weeks, before continuing to Kenya. Few birds cross sea from Italy and S Greece to N Africa. Adults arrive at breeding grounds in Apr. Race hastata apparently not migratory.
Aquila rapax	Tawny eagle	nomadising	Resident in most areas but perhaps some seasonal movement into more arid areas in SW and NE Africa during the rainy season; also some birds perform seasonal N-S movements in W Africa. Often mixes with flocks of migrant A. nipalensis. Rare vagrant to Bangladesh, NW Thailand and perhaps Sri Lanka.
Buteo albonotatus	Zone-tailed hawk	partial	Northernmost birds mostly migratory but some individuals overwinter at N limit of range. In Panama, most birds migrants, but reports throughout year suggest a resident breeding population may have developed. Birds in South America have been claimed to be migrants from N, but species regularly breeds in Venezuela, and perhaps on Trinidad; status of birds further S requires confirmation.
Buteo auguralis	Red-necked buzzard	intracontinental	Regular annual N-S migration in W Africa, moving S in Sept just after rains to breed along forest edge and woodland adjoining Guinea and Upper Congo forests. At recommencement of rains in Mar moves N into drier, more open savamma, where little studied. Movements in C & NE Africa not as obvious or well understood; possibly separate population in N Angola and SW Zaire.
Buteo hemilasius	Upland buzzard	intracontinental	winters mainly N of R Yangtze, occasionally further S, to Guangdong; records of 30 and 40 birds seen on consecutive days in NW Sichuan (C China) in 1989; rare in winter on S slopes of Himalayas in N India and Nepal. Accidental to Japan, mainly in winter, almost certainly from Korea.
Buteo platypterus	Broad-winged	intercontinental	Highly migratory in North America, where entire population departs for winter, except birds in S Florida; sedentary in Caribbean.

Latein	Englisch	Migration	Lit_Bezug
	hawk		During boreal winter mainly occurs from Guatemala to S Peru and Brazil; some birds move 8800 km, mostly following overland route through C America. Migration patterns highly correlated with wind speed and direction. Autumn peak between mid-Sept and early Oct; spring peak mid-Mar in Panama, late Mar to early Apr in S Texas. During days of peak movement, daily flights may number 1000's, with up to estimeted 100,000 seen in single day in E Mexico; along with B. swainsoni perhaps the most conspicuous North American raptor migrant; because of large concentrated flocks. Some migration concentration points in North America differ in spring and autumn.
Buteo polyosoma	Red-backed hawk	partial	In Bolivia, birds in valleys may be permament residents, while those in puna may be migrants from S. During austral winter, birds from Chilean Andes and Patagonia move N to subtropical lowlands of N & E Argentina, Paraguay and perhaps Uruguay. Formerly thought to be only a migrant to Colombia, but recently reported nesting there.
Circus cinereus	Cinereous harrier	partial	Migratory and resident, but transition between these populations not known. Southernmost birds move N to N Argentina, Paraguay and S Brazil; no records in austral winter (May-Aug) from Isla Grande (Tierra del Fuego). Birds appear erratically in Bolivia, perhaps from S part of range.
Elanus leucurus	White-tailed kite	partial	Migratory or nomadic, when prey abundance declines; in California, one population stayed in a reserve, despite sharp drop in prey (vole) abundance, even continuing to catch same proportion of voles, but presumably requiring more time per capture. Transition between migratory and resident populations unknown , especially in S South America; birds from extreme S of range move N to C Chile in May-Jun; in Surinam, most birds are austral migrants, although a few breed. Congregates in large flocks in winter. Often roosts in flocks, usually in trees; one flock of over 100 birds roosted overnight in tall sugarcane, after staging on ground in nearby ploughed field.
Erythrotriorchis radiatus	Red goshawk	range extension	Poorly known. Breeding adults sedentary, though may expand home range in non-breeding season; regularly ranges 8-10 km from nest. Juveniles apparently dispersive, as inferred from sightings up to 500 km from known breeding sites.
Haliaeetus albicilla	White-tailed eagle	partial	Mainly migratory in N and E of breeding range; sedentary elsewhere, including Greenland, Iceland and Norway. Juveniles more dispersive and gregarious; in winter can form flocks of 10's of birds (even 100) in good feeding or roosting areas, e.g. 72 on Hortobagy Plain, Hungary, in Dec 1993. In winter, straggles S from S Sweden through C Europe, rarely to S Europe; in Asia, movements poorly known, with birds occuring from Middle East to E China and Japan. Adults leave N breeding areas later (Oct) and return earlier (Feb-Apr) than juveniles.
Hamirostra melanosternon	Black-breasted buzzard	partial	Poorly understood; apparently some resident and some migratory populations. Breeding birds sedentary in C Australia unless forced to move by drought; dry season (austral winter and spring) breeding migrant to N Australia, withdrwaing from tropical coasts in wet season; avoids CW Australia in summer. Occasional minor irruptions to S and E parts of range during inland drought.
Ictinia mississippiensis	Mississippi kite	intercontinental	Long distance Neotriopical migrant; pre-migratory flocks by early Aug. Loose aggregations of 200-300 birds moving S by early Sept. Birds move S as far as N Argentina and Paraguay, but extent of Neotropical range poorly known. May remain on austral grounds into Mar. In late Apr, as many as 2300 birds per day moving N through coastal Mexico.
Milvus migrans	Black kite	partial	Mainly migratory; at least, shows certain nomadic or dispersive tendency after breeding. Nominate migrans markedly migratory, wintering mainly in sub-Saharan Africa (S to South Africa), and to lesser extent in Middle East; lineatus also migratory, although only partially, or even resident, in China and Japan, but some wintering from SE Asia and Indian Subcontinent, W to Middle East. Race govinda makes movements to avoid monsoon, and depending on food availability; parasitus shows complex pattern, influenced, like govinda and affinis, by seasonal rains, with South African populations migrating N after breeding; aegyptius mainly resident, although appears S to Kenya and Tanzania outside breeding season. Race affinis has resident, partly migratory and irruptive populations; status of birds in Lesser Sundas uncertain, perhaps only vagrants from Australia. Migrates in flocks and gathers to cross sea straits: 40,000-60,000 birds in post-breeding migration at Gibraltar each year; 36.690 recorded in spring 1980 at Elat (Israel).
Pernis ptilorhyncus	Oriental honey- buzzard	partial	Migratory in N populations, sedentary or with local movements in S. Arrives on breeding grounds in Siberia and Japan in May; leaves in Sept/Oct to winter from SE Asia S to Indochina, where migrants may coincide with sedentary populations. Considerable movement recorded over Bali, with 2186 birds seen in 1 month, mainly from mid-Oct to early Nov. The late spring migration is related to availability of food in N breeding zones; arrival in some areas of Punjab in Pakistan coincides with that of migratory rock bee (Apis

Latein	Englisch	Migration	Lit_Bezug
			dorsata). May travel distances in search of feeding areas, e.g. on Indian Subcontinent. Recent records from Andaman Is may refer to migrants od perhaps to local breeding population.
Falconiformes Falconidae Falco concolor	Sooty falcon	intercontinental	Migratory, wintering mainly in Madagascar; also, to lesser extent, on African mainland, in coastal Mozambique and E South Africa, with some birds perhaps further inland. Arrives in Madagascar from late Oct; last birds leave in early May, arriving in breeding areas mainly in Apr, in Israel from late Oct; late birds leave in early May, arriving in breeding areas mainly in Apr, in Israel from late Apr. Rare spring passage migrant to NW Somalia, where often claimed to breed.
Falco eleonorae	Eleonora's falcon	intercontinental	Migratory. Leaves Mediterranean and Red Seas and Somalia, S to main winter quarters in Madagascar; some birds winter in E Africa and Mascarene Is, but little known. Presence in Madagascar coincides with rainy season, favouring abundance of insects; returns to breeding areas in late Apr and May. See page 238.
Falco hypoleucos	Grey falcon	partial	Poorly understood; resident and partly migratory or dispersive populations. Some pairs resident except during drought, when may disperse to coast or inland refugia in summer; some birds, possibly mainly juveniles, migrate to winter in N Australia.
Falco naumanni	Lesser kestrel	intercontinental	Mainly trans-Saharan migrant, although some birds winter in NW Africa and in various regions of S Europe and S Asia, e.g. S Spain, S Turkey, Azerbaijan; occurence in India, and perhaps in Burma, probably refers to birds on passage, with only stragglers overwintering. Most birds migrate to S Africa. Nomadic movements in winter related to local concentrations of insects. Following post-breeding dispersal, birds fly to winter quarters, mainly in Sept; return to breeding areas varies with latitude, Feb in Morocco, Mar-Apr in Europe; juveniles return later. Migrates across broad front, often in large flocks, sometimes mixed with F. vespertinus or F. tinnunculus.
Falco subniger	Black falcon	partial	Poorly understood. Partly migratory and dispersive; apparently some regular movement N for winter and S for summer, with irruptive occurrences related to drought or good rains in arid and semi-arid zones, local abundance of quails or plagues of other prey species.
Galliformes Phasianidae Lagopus lagopus	Willow grouse	partial	Sedentary in some places, e.g. in Scotland and Scandinavia, where only short range altitudinal movements occur. At least partially migratory elsewhere: in N Siberia may move 200-300 km in forested areas; in North America occasionally reachs latitude of N Minnesota and S Ontario. Date and magnitude of movements may depend on food shortages, perhaps linked with population cycles, and mass migrations have occured in some years. Females tend to move farther. Very limited daily movements.
Gruiformes Heliornithidae <i>Heliopais</i> <i>personata</i>	Masked finfoot	intracontinental	Little known. Thought to be essentially sedentary throughout most, if not all, of range, but scarcity of records impedes clear view of movement patterns.
Gruiformes Turnicidae Turnix sylvatica	Common buttonquail	partial	Poorly understood, but sememingly rather complex. Apparently sedentary in W Palearctic. Resident and intra-tropical migrant in Africa: resident with some local movements in Nigeria, Ethiopia, E Africa, Malawi, Zambia, Zimbabwe, South Africa, and probably also in Gambia and Ghana; wet season breeding visitor to drier areas of N tropics (Chad, Sudan, Kenya) and parts of S subtropics (Namibia, Botswana); dry season non-breeding visitor to Zaire, and to Zimbabwe, Zambia and South Africa where these numbers swell resident populations. Resident and locally seasonally nomadic or semi-migratory in Asia; wet season breeding visitor to NW India. Irregular visitor or vagrant to N Yemen, SW Saudi Arabia, S Oman and Iran; formerly occured regularly in winter in S Yemen. Migrates at night.
Pelecaniformes Pelecanidae <i>Pelecanus</i> <i>onocrotalus</i>	Great white pelican	partial	Migratory in N populations; arrives Danube Delta late Mar/Apr, leaves Sept/early Nov; current wintering grounds of European population unknown (see page 301); many Asian breeders winter in Pakistan. Resident and dispersive in tropics and some S temperate sites. Regularly flies long distances from colony to feed, e.g. probably commutes 100's of km daily between colony at Mogode, Cameroon, and L Chad.
Pelecanus philippensis	Spot-billed pelican	partial	Poorly known. Some local movements, other populations sedentary. In S India, birds reported to arrive at colony shortly before breeding in Oct/Nov or Jan/Feb, with most leaving site around May. Recorded as vagrant or even regular non-breeding species in SE China and parts of Indochina, as well as Sumatra and Java, but taxonomic confusion with both P. onocrotalus and P. crispus (see page 290) invalidates many of older records. Formerly found in Philippines, whence described.
Pelecaniformes	Socotra	range	Migratory or dispersive; poorly known. Disperses over Persian Gulf and Arabian Sea, where occurs all year round, reaching Gulf of

Latein	Englisch	Migration	Lit_Bezug
Phalacrocoracidae Phalacrocorax nigrogularis	cormorant	extension	Aden; vagrant to Red Sea coasts of E Africa in Somalia and Ethiopia, and also W India. Also performs some movements connected with feeding; moves in flocks, sometimes enormous; sometimes interpreted as migration.
Pelecaniformes Sulidae Morus capensis	Cape gannet	partial	Adults range little from colony after breeding, most staying in adjacent waters. Young birds migrate N to Gulf of Guinea, also a few off Mozambique. May occur irregularly in European waters.
Sula abbotti	Abott's Booby		Very poorly known; adult birds probably largely sedentary, given exceptionally long breeding cycle, but perform lengthy foraging flights. Young and non-breeders largely absent from Christmas I; many may be in area of upwelling S of Java.
Podicipediformes Podicipedidae <i>Podiceps</i> <i>cristatus</i>	Great crested grebe	partial	Migratory and dispersive, especially in N. After breeding, many make local movements to moult on large lakes and reservoirs; others moult on breeding waters. After moult, more marked movement towards coast; concentrations of up to 20,000 on Ijsselmeer, Netherlands, and 20,000 on Turkish coast of Black Sea; in C Europe and Australia many winter on large lakes. Thought to migrate following coast and also over land, but little known. No true migration in Africa, where extensive dispersal related to rains. In New Zealand local post-breeding dispersal; occasionally performs large scale-movements. Nominate race vagrant to Senegal and Taiwan; race australis accidental to Moluccas.
Podiceps gallardoi	Hooded grebe	local migrant	Migratory. Much movement of flocks between lakes during summer; numbers vary from day to day, suggesting nightly movements. Birds leave before lakes freeze over in May: originally assumed to winter at sea, on Atlantic coast, or in fjords and channels of S Chile; but seems unlikely that they cover long distances; delayed discovery of species and almost complete absence of records away from upland plateaux suggest probable wintering close to breeding areas, perhaps on nearby large enough to have permamently ice-free areas, e.g. L Islote, L Quiroga and L Strobel. Apparently may occasionally establish breeding colonies in areas marginal to main range. Casually near Paine, in Magellanes (S Chile).
Poliocephalus poliocephalus	Hoary-headed grebe	partial	Poorly known. Some regular movements in coastal areas, at least in SE Australia, where large flocks gather during winter in bays and estuaries, or on perennial inland lakes. Highly dispersive in more arid parts of range, where flocks of thousands can turn up in swamps shortly after rise in water level. Some long distance movements, birds reaching remote lakes, and recent colonization of New Zealand; ringing records show movements of up to 572 km. Apparently shows stronger tendency to fly by day than other grebes.
Tachybaptus novaehollandidae	Australasian grebe	partial	Poorly known. Possibly resident in E and SW Australia, migratory in N and dispersive in arid interior; in very dry years, some birds move towards coast. Recent colonization of New Zealand and rapid occupation of temporory water bodies inland indicate extensive movements, with long distance flights, probably at night. Ringing records show movements of up to 338 km. Vagrant to Admiralty Is (Bismarck Archipelago) and Moluccas.
Procellariiformes Diomedeidae <i>Diomedea</i> <i>albatrus</i>	Short-tailed albatross	interoceanic	Present movements unknown , probably still disperses widely in N Pacific, reaching the Gulf of Alaska and W coast of N America, as in past; 3 recent records from Hawaii, including a ringed adult that has visited Midway I regularly since 1972.
Diomedea amsterdamensis	Amsterdam albatross	intraoceanic	Pelagic range unknown . Plumage similarities with immatures of D. exulans may cause confusion at sea. A few possible records off New Zealand.
Diomedea epomophora	Royal albatross	intercontinental	Disperses widely over Southern Ocean after breeding; most birds probably move E, perhaps in circumpolar movement; fair numbers occur off both coasts of S America, many apparently wintering in SW Atlantic; a few off S Africa (mainly sanfordi) and Australia, especially Tasmania. Not recorded N of equator.
Diomedea exulans	Wandering albatross	intercontinental	Disperses widely over Southern Ocean after bredding; most birds probably moving E, perhaps in circumpolar movement; race dabbenena probably stays mainly in S Atlantic and off South Africa; populations of Antipodes, Campbell and Auckland IS apparently remain in Tasman Sea and S Pacific. Several records in N Hemisphere, off Sicily, Portugal and California.
Diomedea melanophris	Black-browed albatross	intercontinental	Despite extensive ringing, movements not very well understood. Strong migratory movement N, with young of different populations showing distinct target areas; perhaps also adults. Most common straggler of all S albatrosses into N Atlantic, with 41 records for Britain alone up to 1985 (see page 206); also recorded off Norway, Faeroe Is, Spitsbergen and Iceland; less common in NW Atlantic, where D. chlororhynchos more regularly recorded. Tradition of ist capture as mascot for fishing vessels may have produced some of N

Latein	Englisch	Migration	Lit_Bezug
			Hemisphere records in past.
Procellariiformes Hydrobatidae <i>Fregetta</i> <i>grallaria</i>	White-bellied storm-petrel	interoceanic	Apparently disperses N to lower latitudes, but probably not as widely as F. tropica. In general, movements poorly known, as specific identification of these 2 species often very difficult, especially at sea.
Oceanodroma matsudairae	Matsudaira's storm-petrel	interoceanic	Long distance migrant; after breeding, moves S across equator perhaps to Timor Sea off NW Australia, where turns W into Indian Ocean, wintering mostly in rich waters of equatorial belt around Seychelles and W to Somalia and Kenya; some birds may winter off NE New Guinea.
Procellariiformes Pelecanoididae Pelecanoides georgicus	South Georgia diving-petrel	range extension	Very little known; presumably sedentary, ramaining throughout year in waters adjacent to colony, but movements at sea difficult to detect. Vagrant to SE Australia.
Pelecanoides urinatrix	Common diving- petrel	range extension	Very little known; presumably fairly sedentary, remaining throughout year in waters adjacent to the colony, but movements at sea difficult to detect. Some dispersal nortwards, e.g. from Falklands to N Argentina; may be more pelagic in dispersal than other species, and possibly even migratory to some extent.
Calonectris diomedea	Cory's shearwater	interoceanic	Migratory. Mediterranean birds mostly come out into Atlantic, where move rapidly S; abundant off South Africa, occurring Nov-May. Race borealis winters off E coasts of N and S America, and probably in SW Indian Ocean, where species recorded in large numbers, Dec-Mar; vagrant to New Zealand. Race edwardsii also leaves breeding grounds, but winter quarters unknown .
Daption capense	Cape petrel	partial	Disperse and perhaps partly migratory; absent from Antarctica Apr-Aug; in subantarctic some birds apparently fairly sedentary. Ranges widely over Southern Ocean and follows cool currents into tropics, especially off W South America; occurs regularly off Galapagos Is. Several records from N Hemisphere; in some cases probably referring to birds captured and kept on ships before subsequent release.
Halobaena caerulea	Blue petrel	partial	Adults perhaps mainly sedentary; visit colonies intermittently during winter and probably remain in surrounding area. Young birds more dispersive, occurring N to 20° S off Peru, and to 40° S in Atlantic and Indian Oceans; also S to zone of pack ice.
Macronectes giganteus	Antarctic giant petrel	intercontinental	Adults probably move little , dispersing only to adjacent waters and generally keeping further S than M. halli; juveniles may follow prevailing winds E around Southern Ocean. Immatures move further N than adults, regularly reaching tropics and typically following cold water currents off S Africa and W South America. Only definite record from N Hemisphere is 1 bird off Ushant, France, in Nov 1967; another giant petrel at Midway Atoll, Hawaii, in 1959, 1961 and 1962 not identified to specific level.
Procellaria westlandica	Westland petrel	intraoceanic	At close of breeding season birds migrate E of New Zealand into C Pacific, some reaching W South America; young birds may spend up to 10 years in zone of Humboldt Current. Small numbers cross Tasman Sea to E Australia; perhaps mainly young birds.
Pterodroma baraui	Barau's petrel	interoceanic	Little known, but seems to disperse N then E, following S Equatorial Current, reaching area of Cocos (Keeling) Is and Christmas I; recorded S to Amsterdam I, and E to Australia. Forages in zone of Subtropoial Convergence to S of Reunion.
Pterodroma cahow	Bermuda petrel	intraoceanic	Very little known; probably disperses N or NW in subtropical Atlantic, following warm part of Gulf Stream.
Pterodroma cookii	Cook's petrel	intraoceanic	Migrates to E Pacific; some birds occur in breeding and wintering areas all year round, perhaps due to poorly synchronized migration; ranges N to Aleutian Is and Hawaii, and E to Californian and W South America.
Pterodroma leucoptera	Gould's petrel	intraoceanic	Very little known. Race brevipes thought to be largely sedentary, other races apparently leave breeding zones, possibly dispersing E into tropical and subtropical Pacific, records from New Zealand and Galapagos.
Pterodroma magentae	Magenta petrel		Very little known. May disperse E over SC Pacific, perhaps reaching waters of Humboldt Current. During breeding, foraging range apparently to E or S in subantarctic waters.
Pterodroma mollis	Soft-plumaged petrel	interoceanic	Little known; most birds apparently leave vicinity of colony after breeding; some populations may be largely sedentary, e.g. birds present around Amsterdam I throughout year. Disperses over S Atlantic and Indian Oceans; young birds may wander more widely than adults.

Latein	Englisch	Migration	Lit_Bezug
Pterodroma phaeopygia	Galápagos petrel	intraoceanic	Probably disperses widely throughout Pacific, perhaps N towards boreal zone (sandwichensis), and E towards Humboldt Current (phaeopygia).
Pterodroma pycrofti	Pycroft's petrel	data deficient	Very little known. Absent from colonies Apr-Oct; said to migrate to N Pacific, but only 1 record to date.
Pterodroma rostrata	Tahiti petrel		Very little known. Probably disperses in tropical and subtropical waters of Pacific, some birds occuring off NE Australia and New Guinea; also recorded off Taiwan and in E Pacific, between Mexico and Peru.
Pterodroma sandwichensis	Hawaiian petrel	intraoceanic	Probably disperses widely throughout Pacific, perhaps N towards boreal zone.
Puffinus auricularis	Townsend shearwater	intraoceanic	Little known; thought to disperse to adjacent seas; recorded S to waters just N of Galapagos Is.
Puffinus Iherminieri	Audubon's shearwater	partial	Little known. Adults thought to be largely sedentary; immatures probably more dispersive. Vagrant to S Africa, Australia and NE Canada.
Puffinus newelli	Newell's shearwater	data deficient	Little known, thought to disperse to adjacent seas; recorded S to waters just N of Galapagos Is.
Puffinus yelkouan	Balearic shearwater	interoceanic	Migratory. Race yelkouan apparently moves NE into Black Sea and disperses around Mediterranean, perhaps occurring in good numbers W to Gibraltar. Race mauretanicus tends to leave Mediterranean: moves N to coast of France and North Sea, but some birds move S towards South Africa; part of population fairly sedentary.
Thalassoica antarctica	Antarctic petrel	partial	Little known; dispersive within normal extent of floating ice, rarely straying far; could be partially migratory. Some birds move N in winter, reaching Antarctic Convergence and sometimes beyond; others remain around edge of ice. Vagrant to South Africa, New Zealand and Tasmania.
Sphenisciformes Spheniscidae <i>Aptenodytes</i> <i>forsteri</i>	Emperor penguin	intracontinental	Probably dispersive, but little known. Few birds seen N of 60° S. Pre-moult period at sea 30 days. Vagrant to New Zealand, S parts of S America and several islands of subantarctic; record furthest N refers to 3 immatures off C Argentina.
Eudyptula minor	Little penguin	range extension	Sedentary. Adults, in particular, stray little from breeding colonies, and after moulting may return to colony sporadically. Pre-moult period at sea c. 40 days. On leaving colony, juveniles perform dispersive movements, with ringing recoveries up to 1000 km from colony; some juveniles at 1-2 years old return to moult at natal colony, and subsequently to breed. Vagrant to Snares Is.
Strigiformes Strigidae Aegolius acadicus	Northern saw- whet owl	partial	Present year-round in breeding range, but considerable numbers move S in autumn, at least in E North America; S movement begins Sept-Nov in E Canada and NE USA, and Oct-Nov farther S; females migrate earlier than males. Common routes are from C Ontario down Ohio R valley tio Kentucky; from Atlantic coastal lowlands from Nova Scotia to North Carolina; and around L Superior from Minnesota to Wisconsin, then S and/or E; however, does not strictly adhere to these routes. In W, movements poorly documented, but probably altitudinal as well as latitudinal. Migrates throughout suppressed by full moon and strong, gusty winds. Accidental Bermuda.
Asio flammeus	Short-eared owl	non migratory	Thought to be highly migratory in N part of range, thugh migration perhaps confused with nomadic food searches and juvenile dispersal; also, wintering areas may become breeding areas if food plentiful. Although present throughout year in middle latitudes, ringing data indicate seasonal N-S and W-SW migration: bird ringes in Oklahoma recovered 1730 km SSE in California. In Europe and Asia, migratory in N of range: N populations winter from Bristish Is, S Scandinavia and C Asia S to N half of Africa and parts of S & E Asia; known to breed in N China and winter in S China. Accidental Spitsbergen, Bear Is, Jan Mayen, Azores, Madeira and Cape Verde Is.
Asio otus	Northern long- eared owl	partial	Resident and migartory; migration poorly understood. Nomadic in response to fluctuating prey numbers in N Europe: overwinters N to C Finland during years with abundant prey, otherwise migratory in most of Fenno-Scandia and yeross northernmost parts of Asian range; birds breeding in Europe may winter as far S as Egypt, but largely sedentary in S Europe; Azores and Canary Is populations non-migratory. Accidental Iceland, Spitsbergen, Bear I, Iraq, Kuwait; in China, breeds in N, winters in S; Asian breeders winter as far S as

Latein	Englisch	Migration	Lit_Bezug
			N India and Indochina. Spring and autumn movements in appropiate directions in USA suggest regular migration (1 ringed in Montana recovered in Guanajuato, Mexico, having travelled 3200 km); presumably regular migrant in N Canada; commonly winters in breeding range throughout USA and extreme S Canada; accidental Alaska, Bermuda and Cuba.
Otus flammeolus	Flammulated owl		Still poorly understood. Altitudinal and translatitudinal migration hypothesized for N populations S to N Mexico, and very probabe that many N birds winter in area from C Mexico to Guatemala, or extending to El Salvador (several winter recvords); S Mexican populations more likely resident. High breeding-site fidelity and variation of diet with prey abundance make nomadic behaviour unlikely. Vagrants recorded in USA E to Florida.
Speotyto cunicularia	Burrowing owl		Most N populations migrate or disperse; little information on routes, times and wintering areas; those breeding in S Canada and N USA probably migrate S, those in SW & SC USA (New Mexico, Colorado, Texas, Oklahoma) migrate or disperse widely. Remaining populations breeding S from California and Florida essentially non-migratory.

Passeriformes mainly

Passeriformes

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Emberizidae	1	Stripe-tailed yellow-finch	Groms migrant	[] locally (perhaps partially migratory) in interior Brazil (s. Pará and Piauí south to Mato Grosso and Paraná).
Emberizidae	Sporophila hypochroma	Rufous-rumped seedeater	Groms migrant	Very locally in n. and e. Bolivia (s. Beni and w. Santa Cruz), sw. Brazil /Emas Nat. Park in extreme s. Goiás and in pantanal east of Corumbá, Mato Grosso), and ne. Argentina (east of Ita-Ibate in n. Corrientes); doubtless also Paraguay. Perhaps an austral migrant northward.
Emberizidae	Sporophila lineola	Lined seedeater	intracontinental	Apparently an austral migrant, breeding in n. Argentina (south to Tucumán, Santiago del Estero, and Santa Fe), Paraguay (mostly w.), and interior cen. and se. Brazil (at least in s. Mato Grosso, Sao Paulo, and Paraná, perhaps north locally to Goiás and Bahia), and se. Bolivia (Tarija, perhaps north to Santa Cruz); in austral winter moves north across e. and cen. Amazonia to n. South America [], where recorded from e. Colombia, Venezuela, and the Guianas. Perhaps also a breeding resident north in e. South America to Cayenne, but more information is needed.
Emberizidae	Sporophila zelichi	Narosky's seedeater	possibly migratory	Genus Sporophila: Migrants B; winter distribution unknown
Furnariidae	Synallaxis frontalis	Sooty-fronted spinetail	intracontinental	E. and interior Brazil (Maranhao, Ceará, and Paraíba south and west to s. Mato Grosso, Mato Grosso do Sul, and Sao Paulo; also in s. Rio Grande do Sul, but not found in coastal se. Brazil), n. and e. Bolivia (west to Beni), Paraguay, Uruguay, and n. Argentina (south to Mendoza, La Pampa, and n. Buenos Aires). Perhaps partially migratory in extreme south of range.
Hirundinidae	Psalidoprocne albiceps	White-headed sawwing	partial	The movements of this swallows are poorly known. It seems to be mainly a partial migrant, and there are several records of birds wandering outside the usual range. In Zambia and Malawi, at least, it is migratory, being present as a breeding population in the Northern and Luapula Provinces and northern Malawi from October to April, sometimes as early as late September and as late as mid May (Benson et al. 1971; Benson and Benson 1977).
Hirundinidae	Psalidoprocne pristoptera	Blue sawwing	partial	Over much of the range, this species is a local resident and partial migrant, and makes local movements after the breeding season, sometimes moving to lower altitudes. In Eritrea, the race pristoptera migrates further south into Ethipia after breeding. In southern Africa the Black Roughwing is a breeding migrant, being present mainly from September to April in the

				southernmost part of the range, and from November to April in Zimbabwe (Maclean 1985). The wintering range of these birds is very poorly known but may be in the northern part of their range in Mozambique, where there is an influx of birds in winter (Benson 1982). The race holomelaena has also been recorded in southern Malawi and southeastern Zimbabwe (Hanmer 1980). The race reichenowi also appears to leave Zambia in the dry season (Aspinwall 1981). The races in central and east Africa are sedentary, making local movements (Lippens and Wille 1976; Britton 1980; Benson 1982). In West Africa, petiti is sedentary (Brosset and Erard 1986).
Icteridae	,,	Lesser red- breasted meadowlark	Groms migrant	Ne. Argentina [], Uruguay (rare), and se. Brazil (also rare; 2 old records from s. Rio Grande do Sul and 1 from Paraná); perhaps only an austral migrant northward.
Motacillidae	Anthus hellmayri	Hellmayr's pipit	intracontinental	Andes of s. Peru (Puno), w. Bolivia, w. Argentina (south locally to Río Negro and w. Chubut, with perhaps isolated records of migrants in Córdoba and Entre Ríos), and s. Chile (Cautín); se. Brazil [], Uruguay, and e. Argentina (Buenos Aires).
	Acrocephalus melanopogon	Moustached warbler	partial	A.m. melanopogon: Local resident and summer visitor east Spain, Mallorca, south France, Corsica, Italy, west Switzerland, southeast Europe, south European USSR, west Turkey, Morocco; winters Sardinia, Sicily, Malta, Cyprus, Tunisia (formerly bred), Morocco. Scarce winter visitor Algeria. Vagrant UK (5; had bred), Channel Is. (1), Portugal, Gibraltar (2), Denmark, Germany (has bred), Poland (1). Local summer visitor (and resident?) south European USSR. A.m. mimica: Local resident and summer visitor east Transcaucasus, Caspian shore, east Turkey, south-west Syria, Lebanon, Jordan, Israel (occasional); winters Middle East east to north-west Indian sub-continent. Scarce winter visitor/migrant (sub-species unknown) Iraq, Kuwait, north Saudi Arabia, Egypt. Vagrant (sub-species unknown) Libya. Tends to be more sedentary in south of range.
	Acrocephalus paludicola	Aquatic warbler	intercontinental	Local summer visitor Germany, Poland, Czechoslovakia, ? Austria (has bred), Hungary, Romania, European USSR; winters west tropical Africa (wintering grounds little known). Scarce migrant UK, Channel Is., France (has bred), Belgium (has bred), Netherlands (has bred), Germany (formerly bred), Switzerland, Italy. Vagrant Eire (12), Spain (44), Luxembourg, Denmark (15), Norway (6), Sweden (17), Finland (3), Malta, Romania (outside breeding areas), Yugoslavia (may breed), Greece, Bulgaria, Turkey, Cyprus, Jordan, north-west Africa, Canary Is., Azores.
Muscicapidae	Turdus amaurochalinus	Creamy-bellied thrush	intracontinental	Breeds e. Bolivia [], s. Brazil [], Paraguay, Uruguay, and n. and cen. Argentina []; during austral winter, some birds move north into se. Peru [] and across cen. and ne. Brazil north to s. and e. Pará and n. Maranhao (mostly June - Oct.); casual in Chile (Atacama). N. limit of breeding uncertain [], as is proportion of Argentinian birds which migrate (the majority apparently leave, except perhaps along the n. border).
Parulidae	Dendroica striata	Blackpoll warbler	intercontinental	Basically an arboreal bird, often feeding high in trees, though it comes lower when migrating. [] Nonbreeding visitor to Guianas (only casual?), Venezuela, Colombia, e. Ecuador, e. Peru, and w. Amaz. Brazil; occasionally overshoots far to the south of its normal wintering range (e.g., 1 Chile record and 2 from Argentina) and perhaps regular locally in se. Brazil (Rio de Janeiro and s. Sao Paulo); Trinidad and Tobago. Breeds n. North America, migrating through West Indies.
Parulidae	Seiurus aurocapillus	Ovenbird	intercontinental	Nonbreeding visitor to n. Colombia [] and n. Venezuela []; Trinidad and Tobago and Netherlands Antilles (where perhaps annual). Breeds North America, wintering mostly in Middle America and West Indies.
Tyrannidae	Agriornis microptera	Grey-bellied shrike-tyrant	intracontinental	S. breeders (nominate race) migrate northward in austral winter (at least June - Oct.), spreading over much of Argentina and ocurring north at least casually to Bolivia (Cochabamba), w. Paraguay (where rare but perhaps regular), and s. Uruguay (apparently no recent records).
Tyrannidae	Attila phoenicurus	Rufous-tailed attila	intracontinental	Breeds in se. Brazil (Rio de Janeiro south to Rio Grande do Sul, and perhaps inland to Goiás and Mato Grosso), e. Paraguay (only sightings, including 1 seen by B. Treiterer in Jan. 1990 at Ybicui Nat. Park in Paraguarí), and ne. Argentina (Misiones); recorded, apparently only during austral winter from May to Oct., in Amaz. Brazil (lower Rio Tapajós area west to Rio Purus drainage) and sw. Venezuela []
Tyrannidae	Contopus virens	Eastern wood- pewee	intercontinental	Nonbreeding visitor to Colombia, w. and cen. Venezuela, Ecuador (south on w. slope to nw. Azuay), e. Peru (south to Cuzco and Madre de Dios), extreme n. Bolivia (Beni at Tumi Chucua), and locally (perhaps overlooked?) in w. Amaz. Brazil (recorded from north of Manaus, Rio Urucu south of Tefé in Amazonas, and Cachoeira Nazaré in Rondonia; the only Brazil specimen is one in the MZUSP from Santa Cruz on the Rio Juruá); 2 sight reports from coastal French Guiana. Breeds in e.

				North America, migrating mainly through Middle America, wintering mostly in South America.
Tyrannidae	Elaenia mesoleuca	Olivaceous elaenia	intracontinental	Locally fairly common to common in forest canopy and borders, woodland, gallery forest, and adjacent clearings. Perhaps more numerous in Rio Grande do Sul, Brazil, than elsewhere, for Belton (1985) considered it "abundant" there. He also considered it only an austral summer visitor (Sept Apr.) to that state, but the extent of its migration is uncertain (s. birds may simply move north into range of more northerly, resident populations?).
Tyrannidae	Knipolegus hudsoni	Hudson's black- tyrant	intracontinental	Breeds in cen. Argentina (s. Córdoba south to Neuquén, Río Negro, and sw. Buenos Aires); during austral winter migrates north through n. Argentina and w. Paraguay to n. Bolivia (north to Beni, from whence a substantial number of specimens) and extreme sw. Brazil (w. Mato Grosso do Sul and sw. Mato Grosso). N. limit of breeding range in Argentina remains uncertain, perhaps somewhat farther north than indicated; we regard breeding evidence from w. Paraguay (see Short 1976) as equivocal. Mostly below 500 m.
Tyrannidae	Myiarchus tyrannulus	Brown-crested flycatcher	range extension	Birds recorded from sw. Amaz. Brazil and Madre de Dios, Peru, are perhaps attributable to austral migration.
Tyrannidae	Tyrannus melancholicus	Tropical kingbird	intracontinental	S. breeders (north to e. Bolivia and to Sao Paulo in Brazil) migrate northward during austral winter, moving into Amazonia (where flocks are regularly seen May - Sept.) and perhaps farther; breeders in n. Middle America are perhaps also somewhat migratory.