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1969

RESEARCH PROGRAMME NO. 24

NIMAL PATHOLOGICAL SURVEY

sponsored by

U.S. ARMY RESEARCH AND DEVELOPMENT GROUP (FAR EAST)

UNDER GRANT NO. DA-CRD-AFE-592-544-67-G73

conducted by

APPLIED SCIENTIFIC RESEARCH CORPORATION OF THAILAND

in collaboration with

TUNGHAI UNIVERSITY, REPUBLIC OF CHINA

BOMBAY NATURAL HISTORY SOCIETY, INDIA

LEMBAGA BIOLOGI NASIONAL (NATIONAL BIOLOGICAL INSTITUTE), INDONESIA

YAMASHINA INSTITUTE FOR ORNITHOLOGY, JAPAN

KYUNG HEE UNIVERSITY, REPUBLIC OF KOREA

UNIVERSITY OF MALAYA, MALAYSIA

UNIVERSITY RESEARCH CENTER, MINDANAO STATE UNIVERSITY, PHILIPPINES

PHILIPPINES NATIONAL MUSEUM, PHILIPPINES

ANNUAL PROGRESS REPORT 1969

BY

H. ELLIOTT McCLURE

MAPS GROUP

ENVIRONMENTAL AND ECOLOGICAL RESEARCH INSTITUTE

ASRCT, BANGKOK 1970

COOPERATIVE RESEARCH PROGRAMME NO. 24
MIGRATORY ANIMAL PATHOLOGICAL SURVEY

sponsored by

U.S. ARMY RESEARCH AND DEVELOPMENT GROUP (FAR EAST)

UNDER GRANT NO. DA-CRD-AFE-592-544-67-G75

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Responsible Investigator: Dr. Prasert Lohavanijaya
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DA Project No. 3A061101A91C 00 086 FE

ABSTRACT

1. Part I: A summary of the number of birds banded by MAPS field teams in 1969, listing 119, 653 birds of 725 species that were ringed.
2. Part II: More than 2, 600 recoveries of 200 species have been received and the migration routes of House Swallow, Ducks and Ardeids in Eastern Asia as suggested by ring recoveries are discussed.
3. Part III: Ectoparasite collections from more than 700 species of birds are being identified by taxonomists and 505 genera and species of parasites are listed.

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*Grant No. DA-CRD-AFE-592-544-68-G137
DA Project No. 3AO61101A91C 00 105 FE

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**Grant No. DA-CRD-AFE-592-544-67-G80
DA Project No. 3AO61101A91C 00 082 FE

*Grant expired Sep 69
**Grant expired Mar 69
Field work continued as non-funded collaborator.

MIGRATORY ANIMAL PATHOLOGICAL SURVEY

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IN MEMORIAM

On September 21, 1969 Melquesidic Bacatan left the field camp at Camp Dunque, Tu-od, Manticao, Misamis Oriental Province, Mindanao and walked along a forest trail toward his bird netting line two kilometers away. His body was found September 28 about 1 1/2 kilometers from camp where he had been murdered by a bandit for the few pesos that he carried. He had been struck from behind and stabbed.

Melquesidic had been with the Mindanao team since January 1967 and had worked continuously at the Camp Dunque station where he was well known by the local people.

His murderer is known but has not been apprehended. It is assumed that he has joined one of the bandit bands roaming the hills.

Our MAPS people have all worked in lonely and dangerous places and have taken the risks that go with biological research in the forests and fields of Asia. It is with deep regret that we must report the death of this promising young man who was engaged in biological studies in an area where such sophisticated activities are not understood by the local people.

FOREWORD

This is the sixth annual report related to the operation of the Migratory Animal Pathological Survey in Eastern Asia. The program began late in 1963 and the First Annual Report, 1964, summarized the organizational work and presented a checklist of Asian birds which has continued to be, with some additions and alterations, the list under which the field observations have been recorded and filed. The 1965, 66, 67 and 68 Annuals presented summaries of reports from the responsible investigators of participating organizations, listed the species ringed and recoveries received and presented data from the ectoparasite and haematozoa studies. This present report summarizes the ringing for 1969 and the accumulation of band recoveries. The haematozoa studies are to be reviewed later.

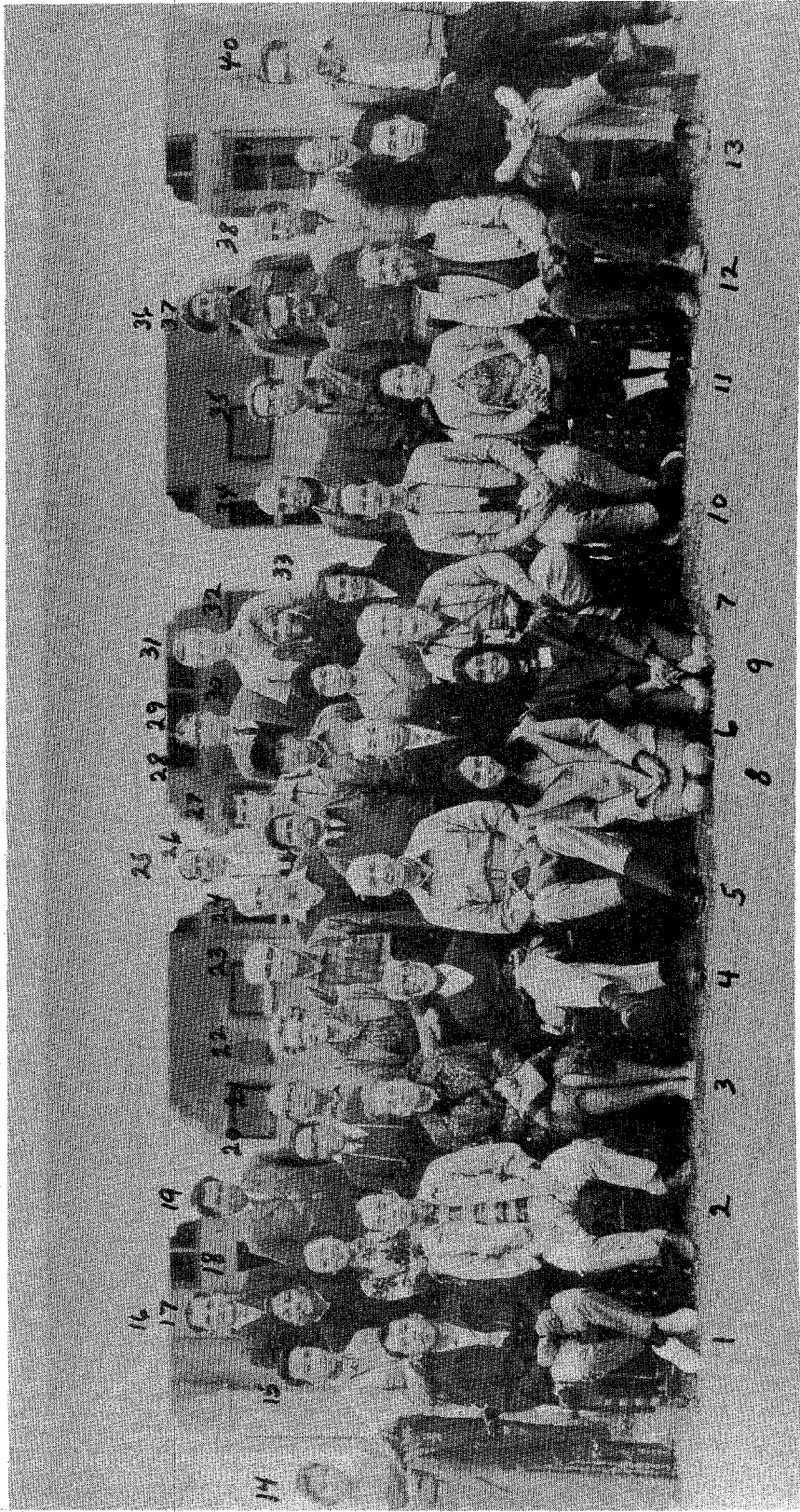


Fig. 1. Group photograph of the people participating in the MAPS and ICBP conference at Bharatpur, India, December 1969.

(1) Dr. S. Somadikarta, Indonesia (2) Dr. Won Pyong-Oh, Korea (3) Mrs. Lucy McClure, MAPS (4) Dr. Salim Ali, India (5) Dr. Dillon Ripley, U.S.A. (6) Dr. Y. Yamashina, Japan (7) Dr. H.E. McClure, MAPS (8) Mrs. Puntipa Kwanyuen, Thailand (9) Mrs. Somtrakul Primrose, Thailand (10) Lord Medway, Malaysia (11) Mrs. Lena Rabor, Philippines (12) Dr. Joe Rabor, Philippines (13) Mr. M. Yoshii, Japan (14) Unidentified visitor (15) Mr. Chen Ping-Huang, Taiwan (16) Unidentified visitor (17) Mr. Sexena, India (18) Mrs. Lucia Severinghaus, Taiwan (19) State Forester (20) Dr. K.Z. Hussain, East Pakistan (21) Mr. Godofredo Alcasid, Philippines (22) Miss E. Foster, Britain (23) Dr. T. Koga, Japan (24) Dr. L. Severinghaus, U.S.A. (25) Unidentified visitor (26) Unidentified visitor (27) Mr. S. Severinghaus, Taiwan (28) Mr. Somtob Chaiyaphan, Thailand (29) Unidentified visitor (30) Miss C. Iwata, Japan (31) Mr. P. Jackson, Britain (32) Mr. Sherjang Singh, India (33) Mrs. Jackson, Britain (34) Col. C.F. Hamilton, India (35) Dr. Naik, India (36) Unidentified visitor (37) Dr. B. Biswas, India (38) Mr. Paney Singh, India (39) Mr. T. Kabaya, Japan (40) Mr. J.C. Daniel, India

MIGRATORY ANIMAL PATHOLOGICAL SURVEY

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PART I

BIRDS BANDED IN 1969

INTRODUCTION

During 1969 the field teams of Korea, Japan, Taiwan, Philippines, Thailand and Malaya continued operations at the reduced scale permitted by the reduction in funds that were available to them. Additional assistance to the Bombay Natural History Society by the Smithsonian Institution permitted them to increase their activities and more birds were ringed by this group than by the others. The Indonesian field work continued at a rate equal to that of 1968.

The MAPS program of ornithological research related to medical problems and the epizootology of zoonoses infections has continued for nearly seven years. Peak efforts were in 1966 and 1967 when thirteen teams were in operation and were fully staffed and fully trained. With the reduction in funds in 1968 and 1969 staff and field work had to be reduced and many of the trained personnel turned to other efforts.

Although the primary objectives of the MAPS program did not include the training of Asian scientists it was realized that the maximum benefits toward continued biological and medical research in Asia would be derived by stimulating Asian students to continue their formal educations. Many students have made use of the results of their field studies for theses for advanced degrees. In Korea five of the students working with MAPS were conferred Master of Science degrees by Kyung Hee University, and one received his Ph. D. degree from Kyushu University in Japan. Four of the participants in the work in Taiwan, including the team leader, are now in the United States attending Universities for their advanced degrees. A Ph. D. and a M. S. degree were given at the University of Malaya for work related to the MAPS program, one of the team leaders in India is seeking an advanced degree in United States and two of the staff members at MAPS headquarters in Thailand are also seeking advanced degrees in U.S. institutions. Ten Masters degrees and three Ph. D. from one small research program speak well for the quality and energy of the staff engaged and the quality of their work.

The 1969 Annual MAPS conference was held in December at the Bharatpur Bird Sanctuary in Rajasthan, India in conjunction with a meeting of the Asian Branch of the International Committee for the Preservation of Birds. (Fig. 1). Team leaders discussed their work for 1969 and attended demonstrations of the banding work being done by the Bombay Natural History Society team working there.

The most important discussions centered around the phasing out of field work since continued reduction in funds for 1970 will necessitate the closing in 1970 of nearly all field studies under support by U. S. Army R & D Group (F. E.)

BIRD BANDING IN 1969

The year 1969 was a very successful one for the field teams. In spite of reduced funds permitting fewer days of field work the total for the year again passed 100, 000 birds. The year by year results for each cooperating institution are given in Table 1. Four groups have ringed more than 100, 000 birds; Kyung Hee University, Korea, under the leadership of Dr. Won; Tunghai University, Taiwan, under Dr. Alexander and Mr. Severinghaus; SEATO Medical Laboratory and the Applied Scientific Research Corporation of Thailand, under Mr. Ben King and Mr. Kitti Thonglongya; and the University of Malaya, under Lord Medway. The joint operations of field teams in the Philippines under Mr. Alcasid and Dr. Rabor also passed 100, 000 birds.

The results of the field work for 1969 are summarized by families in Table 4 and the list of species ringed given in Table 5. The total effort from 1963 through 1969 has resulted in the marking of 953, 663 birds of 1, 108 species. It is estimated that 2, 000 species of birds are in Asia east of the Ural Mountains so that, even with the inclusion of India's extensive fauna in our now outdated check list, more than half of the species in this vast land mass have had birds ringed.

The 725 species banded in 1969 compares favorably with the results of previous years. (Table 5). Each year many unbanded species have been added to the list and many species previously ringed have not been caught. Opportunity and interest of the field teams have accounted for these. Each year some species have been ringed which have failed to be captured again. These have totalled 205 species with the distribution as follows:

TABLE 1: THE TOTAL NUMBER OF BIRDS RINGED BY PARTICIPATING GROUPS.

	1963	1964	1965	1966	1967	1968	1969	Total
Kyung Hee University, Korea		18763	57205	49303	48617	8123	4912	186923
Yamashina Institute, Japan		6057	6288	21913	19497	17227	19990	90972
Tunghai University, Taiwan		802	20983	54192	54130	22247	9424	161778
Hong Kong			174	1972	882	1		3029
Philippines National Museum, Manila								
Luzon	371	4293	10621	16443	11020	4415	1326	48489
Palawan		483	3335	2444	4417	3884	1859	16422
Silliman University, Negros Oriental		3623	11473	6723	4892			26711
Mindanao State University, Mindanao				2830	3491	13416	13459	33196
SEATO Medical Laboratory, Bangkok and Applied Scientific Research Corporation of Thailand, Bangkok	593	6844	30270	59455	18680	30654	17352	163848
US Army Medical Research Unit and University of Malaya, Kuala Lumpur	76	6415	26130	27820	34023	25902	8364	128730
Sabah Museum, Kota Kinabalu		444	22		54	1301		1821
Sarawak Museum, Kuching		1235	1690	48	1245	1617		5835
National Biological Institute, Bogor, Indonesia					68	8664	10356	19088
Bombay Natural History Society, India						24245	31832	56077
University of Saigon, Vietnam				90				90
Guam				10				10
University of the Ryu Kyus, Okinawa		487	600	788				1875
Nepal		109					779	109
Royal Air Force Ornithological Society, Singapore*								779
Total	1040	49555	168791	244021	201026	161796	119653	945782#

* Other years Singapore total combined with that of Malaya.

Differences in Totals for the several tables given here result from delays in the forwarding of records from the field teams.

Year	No. Species	Total Birds
1964	31	296
1965	35	455
1966	14	332
1967	27	56
1968	61	486
1969	37	151
Total	205	1776

This involves 18% of the species handled but less than .2% of the birds.

The accumulative effect of the ringing continues to be evident. Many species now fall in the category of more than a thousand banded. Table 2 illustrates this progression from year to year. As would be expected there has been a leveling off in the various categories with reduced effort and because the easy to catch species still receive the most attention. Thirteen species have now been ringed in numbers greater than 10,000. These are shown in Table 3 and although they make up only 1.1% of the species they include 63% of the birds that have been ringed.

TABLE 2: The Numerical Relationships of the Number of Banded Birds and their Progression from Year to Year.

Percent of Species in this Category based upon accumulated totals.

Number Banded	1965	1966	1967	1968	1969
1	12.9	11.7	9.7	8.8	9.2
2-10	31.1	29.8	27.0	25.5	23.8
11-100	38.7	33.4	32.8	31.5	31.0
101-1000	14.6	19.8	23.8	26.1	26.8
1001-10000	2.2	4.7	5.4	6.8	7.8
10001-over	.4	.6	1.1	1.1	1.1

TABLE 3: Species Banded in Numbers Greater than 10,000 Individuals.

Species	No. Banded	% of Total	
House Swallow	260878	27.3	At Roosts
Rustic Bunting	63663	6.6	As passage migrants in Korea
Chestnut Bunting	47691	5.0	As passage migrants in Korea
Yellow Wagtail	41631	4.3	At Roosts
Brown Shrike	35073	3.6	As passage migrants in Taiwan
Pied Wagtail	26581	2.7	At Roosts
Chestnut Munia	23045	2.4	At Roosts in S. E. Asia
Black-faced Bunting	21436	2.2	As passage migrants in Korea and Roosts in Taiwan
Black-crowned Night Heron	19030	1.9	At Breeding Colonies
Yellow-vented Bulbul	18727	1.9	At Roosts and Breeding Areas
Little Egret	17969	1.8	At Breeding Colonies
Tree Sparrow	14826	1.5	In Cities
Cattle Egret	10708	1.1	At Breeding Colonies
Total	601258	63.0	

Most of the teams have approached their field work in two ways, 1. repetitive banding at selected sites; and 2. exploratory banding in various habitats. At the sites where they have done repeated ringing many species have been recaptured. These repeats and returns furnish us with excellent survival records and the analysis of these will be the subject of a later report. By the end of 1969, 551 species had been handled 39,422 times. The total of birds handled only once plus those taken more than once is 993,085, almost the million birds that was hoped for total. These 551 species make up 49.7% of the total species and 4.1% of all birds ringed.

TABLE 4. SUMMARY BY FAMILIES OF THE NUMBER OF BIRDS BANDED IN 1969. S=SPECIES, T-TOTAL BANDED

Family	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
Podicipedidae											1	1	1
		1									3	3	3
Procellariidae		2181									1	2181	6397
		1									1	1	3
Hydrobatidae		500									1	500	600
											1	1	1
Pelecanidae											3	3	3
										2	3	5	5
Phalacrocoracidae										343	9	352	1794
											1	1	1
Anhingiidae											2	2	7
											4	15	20
Ardeidae	3	6	3	3	2		3	5	3	7	4	15	20
	73	2366	725	14	16		5	21	15	4910	9	8154	56403
Ciconiidae							1				2	3	4
							663				20	683	1260
Threskionithidae											2	2	3
											2	2	3
Phoenicopteridae											1	1	1
											6	6	6
Anatidae		9		1							16	20	22
		447		8							4611	5066	11789
Accipitridae			1				2	1	1		4	7	20
			5				3	2	3		14	27	2666
Pandionidae													1
													1
Falconidae											2	2	6
											2	2	35
Phasianidae		2			1		1		1		4	7	23
		70		133	10		7		3		61	284	6352
			1	2	1		1				1	2	4
Turnicidae			2	5	1		24				12	44	447

TABLE 4. Page 2

Family	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
Gruidae	S										1	1	1
	T										2	2	2
Rallidae	S	2		11	2			3	3		4	15	20
	T	3		183	6			26	4		457	679	5528
Jacaniidae	S										2	2	2
	T										71	71	114
Rostratulidae	S			1			1				1	1	1
	T			45			1				13	59	886
Charadriidae	S	2		1	5				1		9	11	13
	T	2		1	165				1		1432	1606	6585
Scolopacidae	S	4		2	11		2	1	4		26	31	37
	T	12	4	5					4		10836	11561	27558
Recurvirostridae	S	2	53	75	323		85	3	24		2	2	2
	T										104	104	229
Phalaropodidae	S										1	1	1
	T										9	9	65
Burhinidae	S										2	2	2
	T										3	3	5
Glareolidae	S										1	1	2
	T						1				5	5	74
Laridae	S	2			1						9	35	44
	T	1824		13			17	1			156	12	16
Alcidae	S	2									2	2	2
	T	490									1994	1994	8800
Columbidae	S	1		4	4	2	3	7	2		9	490	1542
	T	4	2	223	42	70	7	626	7	5	382	20	30
Psittacidae	S	1		1	1	1		1			2	6	12
	T	2		1	6	6		2			76	87	283
Cuculidae	S	1		8	4		6	8	2		8	21	27
	T	1	3	36	15		12	68	2		302	447	1700
Tytonidae	S	1		1	1		1				1	2	3
	T			8			2				1	11	37
Strigidae	S	1	3	1			6	5			3	9	18
	T	3	7	2			26	9			7	61	714

TABLE 4. Page 3

Family	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
Podargidae				1	1							2	3
				1	1							2	18
				1	1							3	6
Caprimulgidae				1	1				1		2	3	6
				2	23			6	1		7	39	555
				1	1		1	5	1	1	2	10	15
Apodidae				1	1			135	19	3	5	639	6476
				5	469								1
Hemiprocnidae													2
													8
Trogonidae							1	3				5	8
							2	15				18	119
							5	12				16	22
Alcedinidae				4	4				4		4	16	22
				74	22		42	195	36	70	48	523	4872
							3	1	2		2	5	7
Meropidae				1	1			19	5		97	136	3516
				1	1		14	1				1	2
Coraciidae								1				1	2
								5				5	39
Upupidae	1											1	1
	6											1	1
Bucerotidae				1								1	1
				2								49	105
Capitonidae													7
													17
Indicatoridae													15
													555
Picidae													1
													7
Eurylaimidae													38
													954
													7
Pittidae													308
													11
													3401
Alaudidae													9
													1505

TABLE 4. Page 4

Family	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
Hirundinidae	2	3	4	2	3		4	3	3	2	2	7	9
	2717	4398	658	8	117		9704	2739	23	4211	211	24786	29220
Campephagidae			1	1	1	1	7	4	2	1	4	15	22
			1	4	7	31	9	12	8	3	79	155	1487
Dicruridae			1	1	2	1	5	4		1	2	8	9
			1	2	4	9	38	61		2	71	192	1272
Ortoliidae									2	1		2	6
									5	3		8	615
Corvidae	1	2	1					1			3	8	18
	2	8	1					2			17	30	361
Paridae	3	2	2	1			1	1		1	1	6	12
	39	147	14	14			2	2		2	1	221	4759
Certhiidae						1					1	2	5
						2					1	3	37
Sittidae							1				1	2	5
							5				1	6	168
Timaliidae			10		2	2	23	37			1	70	113
			253		37	54	288	614		5	6	1718	14108
Paradoxornithidae	1		2				1			91	381	3	4
	25		49				14					88	3270
Pycnonotidae		1	4	2	4	4	13	21	1	3	6	39	50
		22	24	94	298	1065	291	777	1	43	2462	5077	39009
Aegithinidae					2			5	1	1	2	7	12
					9			40	1	10	174	234	802
Cinclidae													1
Troglodytidae													6
													1
Turdidae	3	13	6	3		1	13	10				40	46
	14	80	193	7		5	117	417		7	11	1533	66
Sylviidae	4	9	10	8	2	7	23	18	3	16	684	11398	79
	5	475	95	65	31	129	429	529	17	5	17	3047	24997
Muscicapidae	1	4	4	7	3	4	15	23	2	5	11	47	66
	1	11	28	54	30	25	239	756	24	11	518	1697	9218

TABLE 4. Page 4

Family	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
Hirundinidae	2	3	4	2	3		4	3	3	2	2	7	9
Campephagidae	2717	4398	658	8	117		9704	2739	23	4211	211	24786	292120
Dicruridae			1	1	1	1	7	4	2	1	4	15	22
Ortolidae			1	4	7	31	9	12	8	3	79	155	1487
Corvidae			1	1	2	1	5	4		1	2	8	9
Paridae			1	2	4	9	38	61	2	2	71	192	1272
Certhiidae	1	2	1						2	1	2	6	6
Sittidae	2	8	1					1	5	3	3	8	615
Timaliidae	3	2	1	1			1	2		17	17	8	18
Paradoxornithidae	39	147	14	14			1	2		1	30	6	361
Pycnonotidae			10		2	2	23	37		5	6	70	113
Aegithinidae	1	25	2		37	54	288	614		91	381	1718	14108
Cinclidae			4	2	4	4	14	21	1	3	6	88	3270
Troglodytidae			4	94	298	1065	13	777	1	43	2462	5077	39009
Turdidae	3	13	6	3						10	174	234	802
Sylviidae	14	80	193	7			117	417		7	11	40	1
Muscicapidae	4	9	10	8	2	5	23	18	3	16	684	1538	11398
	5	475	95	65	31	129	429	529	17	69	1203	3047	24997
	1	4	4	7	3	4	15	23	2	5	11	47	66
	1	11	28	54	30	25	239	756	24	11	518	1697	9218

TABLE 4. Page 5

Family	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
Pachycephalidae				1	1			1	1			3	4
	1	1		1				3				6	184
Prunellidae	1	3										2	3
	2	3						3				4	169
Motacillidae	585	220	4	3	4		6	3			6	7	12
				20	118		2377	13			77	3947	74007
Bombycillidae													1
													40
Artamidae													2
													203
Laniidae	3	2	1	2	1		1	2	1	1		6	9
	10	97	5960	76	2	12	10	113	1	2	3	6445	37032
Sturnidae	1	2		2	1	2	7	3	2	2	5	15	21
	17	17		12	61	171	527	15	20	24	319	1183	5828
				2	5	5	6	12	4	3	4	20	31
Nectariniidae				6	25	217	36	276	85	80	266	991	8085
				1	1	4	1	8	2	2	3	16	21
Dicaeidae				4	1	202	6	118	20	12	105	468	2926
				4	1		2	1		2	1	6	8
Zosteropidae		1	1	1			2	2				276	3229
		26	6	16		172	22	8		5	21	276	3229
Fringillidae	7	15	5	1	1		3				3	25	34
	1409	4588	799	1	1		958				124	7879	169028
				4	4		6	7	6	4	6	17	23
Ploceidae	1	1838	7	59		11244	1350	26	440	405	5916	21286	75403
Total	37	108	76	90	74	50	182	240	60	71	243	725	1108
	4912	19990	9424	1326	1859	13459	17352	6364	779	10356	31832	119653	953663

TABLE 5: BIRDS BANDED IN 1969. LISTED BY COUNTRY AND COMPARED WITH THE TOTAL FOR SIX YEARS

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
PODICIPEDIDAE <u>Podiceps ruficollis,</u> <u>Little Grebe</u>											3	3	3
PROCELLARIIDAE <u>Pterodroma leucoptera,</u> <u>Gould's Petrel</u> <u>Puffinus leucomelas,</u> <u>Streaked Shearwater</u>		2181										2181	6395
HYDROBATIDAE <u>Oceanodroma castro,</u> <u>Madeira Storm Petrel</u> <u>Oceanodroma leucorhoa,</u> <u>Leach's Storm Petrel</u> <u>Oceanodroma monorhis,</u> <u>Swinhoe's Storm Petrel</u>		500										500	576
PELECANIDAE <u>Pelecanus philippensis,</u> <u>Spotted-billed Pelican</u>											3	3	3
PHALACROCORACIDAE <u>Phalacrocorax carbo,</u> <u>Common Cormorant</u> <u>Phalacrocorax fuscicollis,</u> <u>Indian Shag</u>											6	6	8
											1	1	7

TABLE 5. Page 2

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
<u>Phalacrocorax niger</u> , Little Cormorant											2	2	98
<u>Phalacrocorax pygmeus</u> , Pygmy Cormorant										341		341	1182
<u>Phalacrocorax sulcirostris</u> , Little Black Cormorant										2		2	98
ANHINGIDAE													
<u>Anhinga rufa</u> , Darter											2	2	7
ARDEIDAE													
<u>Ardea cinerea</u> , Gray Heron	7									53	2	62	510
<u>Ardea purpurea</u> , Purple Heron													249
<u>Ardeola grayii</u> , Pond Heron													1
<u>Ardeola ibis</u> , Cattle Egret		5	14									3186	10708
<u>Ardeola ralloides</u> , Chinese Pond Heron							3			225		228	1394
<u>Botaurus stellaris</u> , Great Bittern													1
<u>Butorides striatus</u> , Little Green Heron							1	1	13		1	16	237
<u>Dupetor flavicollis</u> , Black Bittern							1	7				8	20
<u>Egretta alba</u> , Large Egret	25	72								10		107	2453

TABLE 5. Page 3

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
<u>Egretta garzetta</u>	41	1664	6							1115		2826	17969
<u>Little Egret</u>											3	3	3
<u>Egretta gularis</u>		128								336		464	2433
<u>Indian Reef Heron</u>										6		6	6
<u>Intermediate Egret</u>													
<u>Egretta sacra</u>													
<u>Reef Egret</u>													
<u>Gorsachius goisagi</u>													
<u>Japanese Night Heron</u>													
<u>Gorsachius melanolophus</u>								1				1	9
<u>Tiger Bittern</u>													
<u>Ixobrychus cinnamomeus</u>				10	15			3	1			29	998
<u>Cinnamon Bittern</u>													
<u>Ixobrychus eurhythmus</u>													
<u>Von Schrenck's Bittern</u>													
<u>Ixobrychus sinensis</u>		7		3	1			9	1			22	323
<u>Chinese Little Bittern</u>													
<u>Nycticorax caledonicus</u>				1								1	15
<u>Rufous Night Heron</u>													
<u>Nycticorax nycticorax</u>		490	705									1195	19030
<u>Black-crowned Night Heron</u>													
CICCONIDAE													
<u>Anastomus oscitans</u>							663					663	1216
<u>Open-billed Stork</u>													
<u>Ibis cinereus</u>													22
<u>Milky Stork</u>													
<u>Ibis leucocephalus</u>											17	17	17
<u>Painted Stork</u>													
<u>Xenorhynchus asiaticus</u>											3	3	5
<u>Black-necked Stork</u>													

TABLE 5. Page 4

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
THRESKIORNITHIDAE													
<u>Threskiornis melanocephala,</u> White Ibis											1	1	186
<u>Platalea leucorodia,</u> Spoonbill											1	1	1
<u>Plegadis falcinellus,</u> Glossy Ibis													156
PHOENICOPTERIDAE													
<u>Phoenicopus roseus,</u> Flamingo											6	6	6
ANATIDAE													
<u>Aix galericulata,</u> Mandarin Duck		1										1	16
<u>Anas acuta,</u> Pintail		199									1025	1224	2529
<u>Anas clypeata,</u> Shoveller		16									498	514	1077
<u>Anas crecca,</u> Teal		108									1062	1170	3226
<u>Anas falcata,</u> Falcated Teal		2										2	7
<u>Anas formosa,</u> Spectacled Teal		1										1	4
<u>Anas luzonica,</u> Philippine Mallard													1
<u>Anas penelope,</u> European Widgeon		106									138	244	522
<u>Anas platyrhynchos,</u> Mallard		11										11	88

TABLE 5. Page 5

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
<u>Anas poecilorhyncha</u>											74	85	229
<u>Spot-billed Duck</u>				8									
<u>Anas querquedula</u>		3									658	658	1240
<u>Garganey</u>											302	302	659
<u>Anas strepera</u>											55	55	95
<u>Gadwall</u>											19	19	21
<u>Anser anser</u>											375	375	888
<u>Graylag Goose</u>											229	229	381
<u>Anser indicus</u>													1
<u>Bar-headed Goose</u>													
<u>Aythya ferina</u>											50	50	232
<u>Common Pochard</u>											4	4	88
<u>Aythya fuligula</u>											27	27	129
<u>Tufted Duck</u>											85	85	347
<u>Aythya marila</u>											10	10	14
<u>Scaup Duck</u>													
<u>Aythya nyroca</u>													
<u>White-eyed Pochard</u>													
<u>Netta rufina</u>													
<u>Red-crested Pochard</u>													
<u>Nettapus coromandelianus</u>													
<u>Cotton Teal</u>													
<u>Sarkidiornis melanotos</u>													
<u>Comb Duck</u>													
<u>Tadorna ferruginea</u>													
<u>Ruddy Sheldrake</u>													
ACCIPITRIDAE													
<u>Accipiter badius</u>											7	7	21
<u>Shikra Goshawk</u>													
<u>Accipiter nisus</u>													
<u>Sparrow Hawk</u>													7

TABLE 5. Page 6

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
<u>Accipiter soloensis</u> , Chinese Goshawk							2					2	73
<u>Accipiter trivirgatus</u> , Crested Goshawk												10	18
<u>Accipiter virgatus</u> , Asiatic Sparrow Hawk		5						2	3			1	109
<u>Aquila heliaca</u> , Imperial Eagle							1					1	1
<u>Aviceda leucophotes</u> , Black-crested Baza												1	1
<u>Butastur indicus</u> , Gray-faced Buzzard													2386
<u>Buteo buteo</u> , Common Buzzard													3
<u>Circus aeruginosus</u> , Marsh Harrier													2
<u>Circus cyaneus</u> , Hen Harrier													1
<u>Circus macrourus</u> , Pallid Harrier											1	1	1
<u>Circus melanoleucus</u> , Pied Harrier											1	1	4
<u>Elanus caeruleus</u> , Black-winged Kite													25
<u>Haliaeetus indus</u> , Brahminy Kite												5	6
<u>Hieraetus kienerii</u> , Rufous-bellied Dwarf Eagle													1
<u>Milvus lineatus</u> , Black-eared Kite													2
<u>Pernis ptilorhynchus</u> , Honey Buzzard											1	1	1

TABLE 5. Page 7

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
<u>Spilornis cheela</u> , <u>Serpent Eagle</u>													1
<u>Spizaetus nipalensis</u> , <u>Hodgson's Hawk Eagle</u>													3
PANDIONIDAE													
<u>Pandion haliaetus</u> <u>Osprey</u>													1
FALCONIDAE													
<u>Microhierax caerulesceus</u> , <u>Red-breasted Falconet</u>													11
<u>Microhierax erythrogenys</u> , <u>Philippine Falconet</u>													7
<u>Pollhierax insignis</u> , <u>White-rumped Falcon</u>													3
<u>Falco peregrinus</u> , <u>Peregrine Falcon</u>											1	1	3
<u>Falco severus</u> , <u>Oriental Hobby</u>										1			1
<u>Falco tinnunculus</u> , <u>Kestrel</u>										1		1	10
PHASIANIDAE													
<u>Arborophila brunneopectus</u> , <u>Bare-throated Tree Partridge</u>													1
<u>Arborophila crudigularis</u> , <u>Formosan Hill Partridge</u>													2
<u>Arborophila gingica</u> , <u>Rickett's Hill Partridge</u>													1

TABLE 5. Page 8

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mincanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
<u>Arborophila rufogularis</u> , <u>Rufous-throated Hill Partridge</u>													2
<u>Argusianus argus</u> , <u>Argus Pheasant</u>													1
<u>Bambusicola thoracica</u> , <u>Bamboo Partridge</u>													12
<u>Caloperdix ocellata</u> , <u>Ferruginous Wood Partridge</u>													2
<u>Coturnix chinensis</u> , <u>Blue-breasted Button Quail</u>				133	10		7		3			153	6046
<u>Coturnix coturnix</u> , <u>Migratory Quail</u>		1										1	24
<u>Francolinus pictus</u> , <u>Painted Partridge</u>											3	3	3
<u>Francolinus pintadeanus</u> , <u>Francolin</u>													7
<u>Francolinus pondicerianus</u> , <u>Gray Partridge</u>											41	41	58
<u>Galloperdix spadicea</u> , <u>Red Spurfowl</u>													1
<u>Gallus gallus</u> , <u>Red Jungle Fowl</u>													5
<u>Lophura erythrophthalma</u> , <u>Crestless Fireback Pheasant</u>													4
<u>Percitula argoondah</u> , <u>Rock Bush Quail</u>												5	18
<u>Percitula asiatica</u> , <u>Jungle Bush Quail</u>												12	13
<u>Phasianus colchicus</u> , <u>Ring-necked Pheasant</u>		69										69	134
<u>Polyplectron inopinatum</u> , <u>Rothschild's Peacock Pheasant</u>													5
<u>Polyplectron malacense</u> , <u>Peacock Pheasant</u>													1

TABLE 5 Page 9

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
<u>Rollulus roulroul</u> , Crested Wood Partridge													1
<u>Symnaticus mikado</u> , Mikado Pheasant													1
<u>Symnaticus reevesii</u> , Reeve's Pheasant													10
TURNICIDAE													
<u>Turnix ocellata</u> , Ocellated Button Quail				2								2	9
<u>Turnix suscitator</u> , Barred Button Quail			2	3	1		24				12	42	276
<u>Turnix sylvatica</u> , Little Button Quail													136
<u>Turnix tanki</u> , Yellow-legged Button Quail													26
GRUIDAE													
<u>Grus antigone</u> , Sarus Crane											2	2	2
RALLIDAE													
<u>Amaurornis olivaceus</u> , Bushhen													3
<u>Amaurornis phoenicurus</u> , White-breasted Waterhen				1					2		11	14	133
<u>Fulica atra</u> , Coot											431	431	1081
<u>Gallinix cinerea</u> , Watercock				14								15	94

TABLE 5. Page 10

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
<u>Gallinula chloropus</u> , Moorhen				40							1	41	276
<u>Poliolimnas cinereus</u> , Grey-bellied Crane													5
<u>Porphyrio porphyrio</u> , Purple Gallinula											14	14	28
<u>Porzana cinerea</u> , White-browed Crane				12	4							16	562
<u>Porzana fusca</u> , Ruddy Crane		2		18					1			21	611
<u>Porzana paykulli</u> , Chinese Banded Crane													6
<u>Porzana porzana</u> , Spotted Crane													2
<u>Porzana pusilla</u> , Ballon's Crane				6								6	355
<u>Porzana tabuensis</u> , Sooty Crane				13								13	364
<u>Rallina eurizonoides</u> , Philippine Banded Crane				41				3				44	967
<u>Rallina fasciata</u> , Malay Banded Crane								22				22	87
<u>Rallus aquaticus</u> , Eastern Water Rail		1										1	7
<u>Rallus mirificus</u> , Luzon Rail				1								1	173
<u>Rallus philippensis</u> , Philippine Rail													17
<u>Rallus striatus</u> , Slaty-breasted Rail				16	2				1			19	708
<u>Rallus torquatus</u> , Barred Rail				21								21	49

TABLE 5. Page 11

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
JACANIDAE													
<u>Hydrophasianus chirurgus</u> , <u>Pheasant-tailed Jacana</u>											42	42	78
<u>Metopidius indicus</u> , <u>Bronze-winged Jacana</u>											29	29	36
ROSTRATULIDAE													
<u>Rostratula benghalensis</u> , <u>Painted Snipe</u>				45			1				13	59	886
CHARADRIIDAE													
<u>Charadrius alexandrinus</u> , <u>Kentish Plover</u>					46						371	417	1032
<u>Charadrius dominicus</u> , <u>Pacific Golden Plover</u>		1		1	12				1			15	640
<u>Charadrius dubius</u> , <u>Little Ringed Plover</u>					88						121	213	2159
<u>Charadrius leschenaulti</u> , <u>Large Sand Plover</u>					17						19	36	1045
<u>Charadrius mongolus</u> , <u>Mongolian Plover</u>		1			2						873	876	1344
<u>Charadrius peroni</u> , <u>Malay Sand Plover</u>				1								1	246
<u>Charadrius placidus</u> , <u>Long-billed Ringed Plover</u>													6
<u>Charadrius squatarolus</u> , <u>Grey Plover</u>											31	31	41
<u>Vanellus cinereus</u> , <u>Grey-headed Lapwing</u>													1
<u>Vanellus indicus</u> , <u>Red-wattled Lapwing</u>												7	27

TABLE 5. Page 12

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
<u>Vanellus leucurus</u> , <u>White-tailed Lapwing</u>											8	8	41
<u>Vanellus spinosus</u> , <u>Spur-winged Lapwing</u>											1	1	1
<u>Vanellus vanellus</u> , <u>Lapwing</u>											1	1	2
SCOLOPACIDAE													
<u>Actitis hypoleucos</u> , <u>Common Sandpiper</u>	2	1		3	33		1	3	18		3	64	1735
<u>Arenaria interpres</u> , <u>Turnstone</u>		56									28	84	603
<u>Calidris acuminatus</u> , <u>Sharp-tailed Sandpiper</u>													8
<u>Calidris alba</u> , <u>Sanderling</u>											2	2	2
<u>Calidris alpina</u> , <u>Dunlin</u>											24	24	145
<u>Calidris canutus</u> , <u>Knot</u>											2	2	2
<u>Calidris ferruginea</u> , <u>Curlew Sandpiper</u>										1183	1183	1183	1216
<u>Calidris ruficollis</u> , <u>Rufous-necked Stint</u>		1		25					1		4950	4977	7192
<u>Calidris subminuta</u> , <u>Long-toed Stint</u>					138							138	1680
<u>Calidris testaceus</u> , <u>Curlew Sandpiper</u>										1	1	1	1
<u>Calidris temmincki</u> , <u>Temminck's Stint</u>					1						178	179	367
<u>Calidris tenuirostris</u> , <u>Great Knot</u>		1									6	7	10

TABLE 5. Page 13

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
<u>Capella gallinago,</u> <u>Common Snipe</u>				11	18						352	381	1319
<u>Capella hardwickii,</u> <u>Latham's snipe</u>	1	6										7	71
<u>Capella megala,</u> <u>Swinhoe's Snipe</u>		44		30	3							77	1934
<u>Capella minima,</u> <u>Jack Snipe</u>											93	93	202
<u>Capella solitaria,</u> <u>Solitary Snipe</u>													1
<u>Capella stenura,</u> <u>Pintail Snipe</u>		2			3		84		1		1	91	246
<u>Heteroscelus brevipes,</u> <u>Grey-rumped Tattler</u>													9
<u>Heteroscelus incanus,</u> <u>Wandering Tattler</u>	55											55	515
<u>Limicola falcinellus</u> <u>Broad-billed Sandpiper</u>	3								4		323	330	348
<u>Limosa lapponica,</u> <u>Bar-tailed Godwit</u>	10										9	19	21
<u>Limosa limosa,</u> <u>Black-tailed Godwit</u>											36	36	39
<u>Numenius arquatus,</u> <u>Common Curlew</u>											3	3	7
<u>Numenius borealis,</u> <u>Least Whimbrel</u>													1
<u>Numenius madagascariensis,</u> <u>Australian Curlew</u>													2
<u>Numenius phaeopus,</u> <u>Common Whimbrel</u>	25										9	34	254
<u>Philomachus pugnax,</u> <u>Ruff</u>											2160	2160	4507

TABLE 5. Page 14

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
<u>Scolopax rusticola</u> , Eurasian Woodcock		2										2	14
<u>Tringa erythropus</u> , Dusky Red Shank											6	6	54
<u>Tringa glareola</u> , Wood Sandpiper		2	1	6	113						1116	1238	3854
<u>Tringa guttifer</u> , Nordmann's Greenshank													1
<u>Tringa nebularia</u> , Greenshank					1						22	23	129
<u>Tringa ochropus</u> , Green Sandpiper					6						10	16	169
<u>Tringa stagnatilis</u> , Marsh Sandpiper					1						146	147	205
<u>Tringa totanus</u> , Redshank					6						124	130	514
<u>Xenus cinereus</u> , Terek Sandpiper		3									49	52	96
RECURVIROSTRIDAE													
<u>Himantopus himantopus</u> , Black-winged Stilt											103	103	228
<u>Recurvirostra avosetta</u> , Avocet											1	1	1
PHALAROPODIDAE													
<u>Phalaropus lobatus</u> , Red-necked Phalarope											9	9	65

TABLE 5. Page 15

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
BURHINIDAE													
<u>Burhinus oedicnemus,</u> European Stone Curlew											2	2	4
<u>Esacus magirostris,</u> Reef Thick-knee											1	1	1
GLAREOLIDAE													
<u>Glareola lactea,</u> Small Pratincole											5	5	7
<u>Glareola maldivarum,</u> Collared Pratincole				13			17					30	67
LARIDAE													
<u>Chlidonias hybridus,</u> Whiskered Tern											1	1	4
<u>Gelochelidon nilotica,</u> Gull-billed Tern											6	6	7
<u>Hydroprogne caspia,</u> Caspian Tern											2	2	2
<u>Larus argentatus,</u> Herring Gull													1
<u>Larus brunneicephalus,</u> Brown-headed Gull											12	12	13
<u>Larus crassirostris,</u> Black-tailed Gull	1822											1822	8407
<u>Larus genei,</u> Slender-billed Gull											1	1	1
<u>Larus ichthyæctus,</u> Great Black-headed Gull											1	1	1

TABLE 5. Page 16

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
<u>Larus schistisagus</u> , <u>Slaty-backed Gull</u>		2										2	2
<u>Sterna albifrons</u> , <u>Little Tern</u>											11	11	12
<u>Sterna anaetheta</u> , <u>Bridled Tern</u>													68
<u>Sterna bengalensis</u> , <u>Lesser Crested Tern</u>													5
<u>Sterna bergii</u> , <u>Crested Tern</u>										11	11	11	11
<u>Sterna fuscata</u> , <u>Sooty Tern</u>													1
<u>Sterna hirundo</u> , <u>Common Tern</u>										111	111	111	136
<u>Sterna sumatrana</u> , <u>Black-naped Tern</u>								14				14	129
ALCIDAE													
<u>Cerorhinca monocerata</u> , <u>Hornbilled Puffin</u>		488										488	1533
<u>Synthliboramphus antiquus</u> , <u>Ancient Murrelet</u>													6
<u>Synthliboramphus wumizusume</u> , <u>Japanese Murrelet</u>													1
<u>Uria aalge</u> , <u>Common Guillemot</u>		2										2	2
COLUMBIDAE													
<u>Chalcophaps indica</u> , <u>Emerald Dove</u>				30	27	19	5	152		1	1	235	2353

TABLE 5. Page 17

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
<u>Columba elphinstoni</u> ,											18	18	20
<u>Nilgiri Wood Pidgeon</u>													1
<u>Columba janthina</u> ,													11
<u>Japanese Wood Pidgeon</u>													2
<u>Columba livia</u> ,													1
<u>Rock Dove</u>													4
<u>Columba pulchricollis</u> ,													12
<u>Ashy Wood Pidgeon</u>													1
<u>Columba vitiensis</u> ,													1
<u>Metallic Wood Pidgeon</u>													4
<u>Ducula badia</u> ,													12
<u>Mountain Imperial Pidgeon</u>													12
<u>Ducula carola</u> ,													12
<u>Spotted Imperial Pidgeon</u>													177
<u>Geopelia striata</u> ,													177
<u>Zebra Dove</u>													8
<u>Macropygia phasianella</u> ,													8
<u>Red Cuckoo-Dove</u>													8
<u>Macropygia ruficeps</u> ,													2
<u>Little Cuckoo-Dove</u>													5
<u>Macropygia unchall</u> ,													5
<u>Barred Cuckoo-Dove</u>													8
<u>Phapitreron amethystina</u> ,													11
<u>Amethyst Brown Fruit Dove</u>													11
<u>Phapitreron leucotis</u> ,													11
<u>White-eared Brown Fruit Dove</u>													673
<u>Ptilinopus jambu</u> ,													673
<u>Pink-headed Fruit Dove</u>													1430
<u>Ptilinopus leclancheri</u> ,													1430
<u>Black-chinned Fruit Dove</u>													41
<u>Ptilinopus melanocephalus</u> ,													41
<u>Black-naped Fruit Dove</u>													3
<u>Ptilinopus occipitalis</u> ,													3
<u>Yellow-breasted Fruit Dove</u>													92

TABLE 5. Page 18

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
<u>Streptopelia bitorquata</u> ,										2		17	999
<u>Javanese Turtle Dove</u>				15									
<u>Streptopelia chinensis</u> ,		1			3		1	7	1	5	63	81	341
<u>Spotted-necked Dove</u>											24	24	71
<u>Streptopelia decaocto</u> ,													
<u>Ring Dove</u>											8	13	67
<u>Streptopelia orientalis</u> ,		4											
<u>Eastern Turtle Dove</u>		1											
<u>Streptopelia senegalensis</u> ,											259	259	344
<u>Little Brown Dove</u>													
<u>Streptopelia tranquebarica</u> ,											7	7	93
<u>Red Turtle Dove</u>													
<u>Treron curvirostra</u> ,								118				118	245
<u>Lesser Thick-billed Green Pidgeon</u>													
<u>Treron olax</u> ,								4				4	28
<u>Little Green Pidgeon</u>													
<u>Treron phoenicoptera</u> ,											1	1	4
<u>Yellow-footed Green Pidgeon</u>													
<u>Treron pompadora</u> ,													
<u>Pompadour Green Pidgeon</u>											1	1	28
<u>Treron sphenura</u> ,													
<u>Wedge-tailed Green Pidgeon</u>							1	2				3	8
<u>Treron vernans</u> ,													
<u>Pink-necked Green Pidgeon</u>					4							4	359
PSITTACIDAE													
<u>Bolbopsittacus lunulatus</u> ,													39
<u>Guaibero</u>													
<u>Loriculus galgulus</u> ,								2				2	3
<u>Blue-crowned Hanging Parrot</u>													
<u>Loriculus philippensis</u> ,						6						6	14
<u>Philippine Hanging Parrot</u>													

TABLE 5. Page 19

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
<u>Loriculus vernalis</u> ,													20
<u>Javanese Hanging Lorikeet</u>												2	2
<u>Melopsittacus undulatus</u> ,		2										2	24
<u>Budgerigar</u>												1	56
<u>Prioniturus discursus</u> ,					1							42	90
<u>Blue-headed Raquet-tailed Parrot</u>											42	34	9
<u>Psittacula cyanocephala</u> ,											42	34	1
<u>Indian Blossom-headed Parakeet</u>											42	34	4
<u>Psittacula krameri</u> ,											42	34	21
<u>Rose-ringed Parakeet</u>											42	34	
<u>Psittacula longicauda</u> ,											42	34	
<u>Long-tailed Parakeet</u>											42	34	
<u>Psittacula roseata</u> ,											42	34	
<u>Blossom-head Parakeet</u>											42	34	
<u>Psittacula cyanurus</u> ,											42	34	
<u>Blue-rumped Parrot</u>											42	34	
<u>Tanygnathus lucionensis</u> ,											42	34	
<u>Blue-naped Parrot</u>											42	34	
CUCULIDAE													
<u>Cacomantis merulinus</u> ,				10	11				1		139	163	552
<u>Plaintive Cuckoo</u>										2		1	35
<u>Cacomantis sonnerati</u> ,												1	216
<u>Banded Bay Cuckoo</u>								1				5	26
<u>Cacomantis variolosus</u> ,												15	103
<u>Fantail Cuckoo</u>											12	8	29
<u>Centropus sinensis</u> ,				5								15	
<u>Common Coucal</u>							3					1	
<u>Centropus touilou</u> ,												1	
<u>Lesser Coucal</u>			2									1	
<u>Centropus viridis</u> ,				1	1							2	
<u>Philippine Cuckoo</u>												2	

TABLE 5. Page 20

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
<u>Chrysococcyx maculatus,</u> <u>Emerald Cuckoo</u>								1	1			2	3
<u>Chrysococcyx malayanus,</u> <u>Malay Cuckoo</u>								6				6	29
<u>Chrysococcyx xanthorhynchus,</u> <u>Violet Cuckoo</u>							3	11			20	34	61
<u>Clamator coromandus,</u> <u>Red-winged Crested Cuckoo</u>											10	10	14
<u>Clamator jacobinus,</u> <u>Pied Crested Cuckoo</u>													86
<u>Cuculus canorus,</u> <u>Common Cuckoo</u>		1		2								3	41
<u>Cuculus fugax,</u> <u>Hawk Cuckoo</u>				2	1							6	19
<u>Cuculus micropterus,</u> <u>Indian Cuckoo</u>								3				6	20
<u>Cuculus poliocephalus,</u> <u>Little Cuckoo</u>			2								11	13	46
<u>Cuculus saturatus,</u> <u>Blyth's Cuckoo</u>												2	71
<u>Cuculus sparverioides,</u> <u>Large Hawk Cuckoo</u>	1			10								10	8
<u>Cuculus vagans,</u> <u>Lesser Hawk Cuckoo</u>													1
<u>Cuculus varius,</u> <u>Common Hawk Cuckoo</u>				2							1	1	114
<u>Eudynamis scolopacea,</u> <u>Koel</u>								1			69	72	4
<u>Phaenicophaeus curvirostris,</u> <u>Chestnut-breasted Malcoha</u>													1
<u>Phaenicophaeus diardi,</u> <u>Lesser Green-billed Malcoha</u>													2
<u>Phaenicophaeus sumatranus,</u> <u>Rufous-bellied Malcoha</u>													

TABLE 5. Page 21

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
<u>Phaenicophaeus superciliosus</u> , Rough-crested Malcoha													5
<u>Phaenicophaeus tristis</u> , Large Green-billed Malcoha							3					3	9
<u>Phaenicophaeus viridirostris</u> , Small Green-billed Malcoha											40	40	40
<u>Surniculus lugubris</u> , Drongo Cuckoo					2		1	39		3		45	133
TYTONIDAE													
<u>Phodilus badius</u> , Bay Owl													11
<u>Tyto alba</u> , Barn Owl							2				1	3	3
<u>Tyto capensis</u> , Grass Owl					8							8	23
STRIGIDAE													
<u>Asio flammeus</u> , Short-eared Owl													3
<u>Asio otus</u> , Long-eared Owl													7
<u>Athene brama</u> , Spotted Owlet							2					2	17
<u>Bubo bubo</u> , Eagle Owl													1
<u>Bubo coromandus</u> , Dusky Eagle Owl											5	5	7
<u>Glaucidium brodiei</u> , Pygmy Owlet			2				1	2				5	51

TABLE 5. Page 22

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
<u>Glaucidium cuculoides</u> , <u>Barréd Owllet</u>							1					1	30
<u>Ketupa ketupa</u> , <u>Fish Owl</u>								1				1	5
<u>Ninox philippensis</u> , <u>Philippine Boobook Owl</u>													98
<u>Ninox scutulata</u> , <u>Brown Hawk Owl</u>							1	1			1	3	83
<u>Otus bakkamoena</u> , <u>Collared Scops Owl</u>				2			19	1		5	1	31	228
<u>Otus brookei</u> , <u>Rajah Scops Owl</u>			3										1
<u>Otus rufescens</u> , <u>Reddish Scops Owl</u>													13
<u>Otus sagittatus</u> , <u>White-fronted Scops Owl</u>													3
<u>Otus scops</u> , <u>Scops Owl</u>		3	2				2	4				11	104
<u>Otus spilocephalus</u> , <u>Mountain Scops Owl</u>										2		2	53
<u>Strix aluco</u> , <u>Tawny Owl</u>													1
<u>Strix uralensis</u> , <u>Ural Owl</u>													9
PODARGIDAE													
<u>Batrachostomus javensis</u> , <u>Javan Frog-Mouth</u>					1							1	4
<u>Batrachostomus septimus</u> , <u>Philippine Frog-Mouth</u>				1								1	11
<u>Batrachostomus stellatus</u> , <u>Gould's Frog-Mouth</u>													3

TABLE 5. Page 23

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
CAPRIMULGIDAE													
<u>Caprimulgus affinis</u> , Savanna Nightjar											2	2	44
<u>Caprimulgus asiaticus</u> , Common Indian Nightjar													1
<u>Caprimulgus concretus</u> , Bonaparte's Nightjar													4
<u>Caprimulgus indicus</u> , Migratory Nightjar				2							5	10	35
<u>Caprimulgus macrurus</u> , Long-tailed Nightjar					23			3				27	455
<u>Eurostopodus macrotis</u> , Great-eared Nightjar								3	1				16
APODDAE													
<u>Apus affinis</u> , House Swift									19		1	20	1123
<u>Apus pacificus</u> , White-rumped Swift								5				5	18
<u>Chaetura cochinchinensis</u> , White-throated Spinetail Swift								6				6	7
<u>Chaetura gigantea</u> , Malaysian Spinetail Swift								22				22	51
<u>Chaetura leucopygialis</u> , White-rumped Spinetail Swift													1
<u>Chaetura picina</u> , Philippine Spinetail Swift													2
<u>Collocalia brevirostris</u> , Himalayan Swiftlet													1
<u>Collocalia esculenta</u> , White-bellied Swiftlet								100				103	4345

TABLE 5. Page 24

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
<u>Collocalia gigas</u> , Giant Swiftlet								2				2	3
<u>Collocalia inexpectata</u> , Edbite-nest Swiftlet							1					1	9
<u>Collocalia maxima</u> , Low's Swiftlet												7	111
<u>Collocalia troglodytes</u> , Pygmy Swiftlet			5			2							12
<u>Collocalia vestita</u> , Brown-rumped Swiftlet												469	782
<u>Collocalia whiteheadi</u> , Whitehead's Swiftlet					469						4	4	10
<u>Cypsiurus parvus</u> , Palm Swift													
HEMIPROCINIDAE													
<u>Hemiproctes comata</u> , White-whiskered Tree Swift													2
TROGONIDAE													
<u>Harpactes ardens</u> , Philippine Trogon						1						1	9
<u>Harpactes diardii</u> , Diard's Trogon								5				5	17
<u>Harpactes duvauceli</u> , Red-rumped Trogon								1				1	19
<u>Harpactes erythrocephalus</u> , Red-headed Trogon							2					2	47
<u>Harpactes kasumba</u> , Red-naped Trogon													4
<u>Harpactes oreskios</u> , Orange-breasted Trogon													4

TABLE 5. Page 25

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
<u>Harpactes orrhophaeus</u> , <u>Cinnamon-rumped Trogon</u>								9				9	14
<u>Harpactes whiteheadi</u> , <u>Whitehead's Trogon</u>													5
ALCEDINIDAE													
<u>Alcedo atthis</u> , <u>Common Kingfisher</u>								1	7		2	10	991
<u>Alcedo euryzona</u> , <u>Blue-banded Kingfisher</u>							2	1				3	17
<u>Alcedo meninting</u> , <u>Deep Blue Kingfisher</u>				1				12				13	112
<u>Ceryle lugubris</u> , <u>Pied Kingfisher</u>											3	3	4
<u>Ceryle rudis</u> , <u>Lesser Pied Kingfisher</u>											3	3	3
<u>Ceyx argentatus</u> , <u>Silvery Kingfisher</u>													1
<u>Ceyx cyanopectus</u> , <u>Dwarf River Kingfisher</u>													4
<u>Ceyx erithacus</u> , <u>Black-backed Kingfisher</u>							3	101				104	413
<u>Ceyx melanurus</u> , <u>Philippine Forest Kingfisher</u>													2
<u>Ceyx rufidorsus</u> , <u>Red-backed Kingfisher</u>					3			13				16	112
<u>Halcyon caeruleascens</u> , <u>Small-blue Kingfisher</u>										16		16	16
<u>Halcyon chloris</u> , <u>White-collared Kingfisher</u>				71	16	20		33	24			201	2100
<u>Halcyon concreta</u> , <u>Chestnut-collared Kingfisher</u>								2			2	2	61

TABLE 5. Page 26

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
<u>Halcyon coromanda</u> , Ruddy Kingfisher				3	2			16				21	344
<u>Halcyon cyanoventris</u> , Java Kingfisher													1
<u>Halcyon hombroni</u> , Blue-capped Wood Kingfisher													2
<u>Halcyon lindsayi</u> , Spotted Wood Kingfisher													43
<u>Halcyon pileata</u> , Black-capped Kingfisher							10	5	4			19	147
<u>Halcyon sancta</u> , Sacred Kingfisher										17		17	18
<u>Halcyon smyrnensis</u> , White-breasted Kingfisher						16	18	7	1		40	82	396
<u>Lacedo pulchella</u> , Banded Kingfisher								2				2	27
<u>Pelargopsis capensis</u> , Stork-billed Kingfisher							9	2				11	58
MEROPIDAE													
<u>Merops leschenaulti</u> , Bay-headed Bee-eater							11					11	467
<u>Merops orientalis</u> , Green Bee-eater							1				90	91	220
<u>Merops philippinus</u> , Blue-tailed Bee-eater						1					7	8	389
<u>Merops superciliosus</u> , Brown-breasted Bee-eater									1			1	226
<u>Merops viridis</u> , Blue-throated Bee-eater							2	19	4			25	2202
<u>Nyctornis amictus</u> , Red-bearded Bee-eater													5

TABLE 5. Page 27

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
<u>Nyctioris athertoni</u> , <u>Blue-bearded Bee-eater</u>													7
CORACIIDAE <u>Coracias benghalensis</u> , <u>Burmese Roller</u> <u>Eurystomus orientalis</u> , <u>Broad-billed Roller</u>								5				5	7 32
UPUPIDAE <u>Upupa epops</u> , <u>Hoopoe</u>											43	49	105
BUCEROTIDAE <u>Anthracoceros albirostris</u> , <u>Northern Pied Hornbill</u> <u>Buceros bicornis</u> , <u>Great Hornbill</u> <u>Penelopides panini</u> , <u>Tarctic Hornbill</u> <u>Ptilolaemus tickelli</u> , <u>Tickell's Hornbill</u> <u>Rhyticeros plicatus</u> , <u>Blyth's Hornbill</u> <u>Rhyticeros undulatus</u> , <u>Wreathed Hornbill</u> <u>Tockus birostris</u> , <u>Common Grey Hornbill</u>				2								2	4 1 5 1 1 2 3

TABLE 5. Page 28

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
CAPTIONIDAE													
<u>Calorhamphus fuliginosus</u> ,								1				1	9
<u>Brown Barbet</u>													
<u>Megalaima asiatica</u> ,													38
<u>Blue-throated Barbet</u>													
<u>Megalaima australis</u> ,													5
<u>Little Barbet</u>													
<u>Megalaima chrysopogon</u> ,													1
<u>Gold-whiskered Barbet</u>													
<u>Megalaima faiostricta</u> ,													8
<u>Green-eared Barbet</u>													
<u>Megalaima franklinii</u> ,													82
<u>Golden-throated Barbet</u>													
<u>Megalaima haemacephala</u> ,											21	22	268
<u>Coppersmith Barbet</u>						1							
<u>Megalaima henrici</u> ,													2
<u>Yellow-crowned Barbet</u>													
<u>Megalaima incognita</u> ,													12
<u>Hume's Blue-throated Barbet</u>													
<u>Megalaima mystacophanes</u> ,													9
<u>Caudy Barbet</u>												1	7
<u>Megalaima corti</u> ,										1			
<u>Muller's Barbet</u>													
<u>Megalaima virens</u> ,													11
<u>Great Barbet</u>													
<u>Megalaima viridis</u> ,											46	46	82
<u>Small Green Barbet</u>													
<u>Megalaima zeylanica</u> ,													9
<u>Lineated Barbet</u>													
<u>Psilopogon pyrolophus</u> ,												1	12
<u>Fire-tufted Barbet</u>								1					

TABLE 5. Page 29

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
INDICATORIDAE													
<u>Indicator archipelagicus</u> , Malay Honey Guide										"			7
PICIDAE													
<u>Blythipicus pyrrhotis</u> , Bay Woodpecker													15
<u>Blythipicus rubiginosus</u> , Maroon Woodpecker								1				1	38
<u>Chrysocolaptes lucidis</u> , Golden-backed Four-toed Woodpecker						1						1	27
<u>Dendrocopos atratus</u> , Striped-breasted Pied Woodpecker													10
<u>Dendrocopos canicapillus</u> , Oriental Pygmy Pied Woodpecker													5
<u>Dendrocopos darjellensis</u> , Darjeeling Pied Woodpecker													2
<u>Dendrocopos kizuki</u> , Japanese Pygmy Woodpecker													9
<u>Dendrocopos leucotos</u> , White-backed Woodpecker													3
<u>Dendrocopos macel</u> , Fulvous-breasted Red Woodpecker										2		2	6
<u>Dendrocopos maculatus</u> , Philippine Pygmy Woodpecker													4
<u>Dendrocopos mahrattensis</u> , Yellow-fronted Pied Woodpecker													19
<u>Dendrocopos major</u> , Great Spotted Woodpecker													47
<u>Dendrocopos moluccensis</u> , Malaysian Pygmy Pied Woodpecker								6				7	17
<u>Dendrocopos nanus</u> , Pygmy Woodpecker											1	1	1

TABLE 5. Page 30

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
<u>Dinopium benghalense</u>											29	29	48
<u>Lesser Golden-backed Woodpecker</u>													
<u>Dinopium javanense,</u> <u>Golden-backed Three-Toed Woodpecker</u>				1				9	1			11	59
<u>Dinopium rafflesi,</u> <u>Olive-backed Three-toed Woodpecker</u>								1				1	7
<u>Dryocopus javensis,</u> <u>White-bellied Black Woodpecker</u>													5
<u>Gecinulus grantia,</u> <u>Pale-headed Woodpecker</u>													8
<u>Hemicircus canente,</u> <u>Heart-spotted Woodpecker</u>													3
<u>Hemicircus concretus,</u> <u>Grey Woodpecker</u>								2				2	2
<u>Jynx torquilla,</u> <u>Wryneck</u>							1					9	117
<u>Meiglyptes tristis,</u> <u>Fuivous-rumped Woodpecker</u>		2									6		15
<u>Meiglyptes tukki,</u> <u>Buff-necked Woodpecker</u>													68
<u>Micropternus brachyurus,</u> <u>Rufous Woodpecker</u>								4				4	61
<u>Mulleripicus funebris,</u> <u>Sooty Woodpecker</u>												1	2
<u>Picumnus innominatus,</u> <u>Speckled Piculet</u>				1								2	36
<u>Picus awokera,</u> <u>Japanese Green Woodpecker</u>		1										1	6
<u>Picus canus,</u> <u>Black-naped Green Woodpecker</u>													16
<u>Picus chlorolophus,</u> <u>Lesser Yellow-naped Woodpecker</u>									1			17	24
<u>Picus erythropygius,</u> <u>Red-rumped Green Woodpecker</u>													6

TABLE 5. Page 31

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
<u>Picus flavinucha</u> , Large Yellow-naped Woodpecker													17
<u>Picus mentalis</u> , Checker-throated Woodpecker								2				2	4
<u>Picus miniaceus</u> , Banded Red Woodpecker								1				1	7
<u>Picus punicus</u> , Crimson-winged Woodpecker													4
<u>Picus vittatus</u> , Bamboo Green Woodpecker							2	10				12	95
<u>Sasia abnormis</u> , Rufous Piculet								5				11	98
<u>Sasia ochracea</u> , White-browed Rufous Piculet							4					4	43
EURLAIMIDAE													
<u>Calypomena viridis</u> , Green Broadbill								10				10	144
<u>Cymbirhynchus macrorhynchus</u> , Black-and-Red Broadbill								4				4	36
<u>Eurylaimus javanicus</u> , Banded Broadbill													15
<u>Eurylaimus ochromalus</u> , Black-and-Yellow Broadbill													5
<u>Eurylaimus steerii</u> , Wattled Broadbill													9
<u>Psarisomus dalhousiae</u> , Long-tailed Broadbill													16
<u>Serilophus lunatus</u> , Silver-breasted Broadbill							10					10	83

TABLE 5. Page 32

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
PITTIDAE													
<u>Pitta caerulea</u> ,								1				1	2
<u>Giant Pitta</u>													10
<u>Pitta cyanea</u> ,													
<u>Lesser Blue Pitta</u>													
<u>Pitta erythrogaster</u> ,				61								61	1784
<u>Red-breasted Pitta</u>													
<u>Pitta granatina</u> ,													
<u>Garnet Pitta</u>								1				1	11
<u>Pitta guajana</u> ,													
<u>Banded Pitta</u>								1				1	11
<u>Pitta gurneyi</u> ,													
<u>Gurney's Pitta</u>													
<u>Pitta kochi</u> ,													
<u>Koch's Pitta</u>													2
<u>Pitta moluccensis</u> ,													
<u>Blue-winged Pitta</u>							1	216			103	320	528
<u>Pitta oatesi</u> ,													
<u>Fulvous Pitta</u>													5
<u>Pitta phayrei</u> ,													
<u>Phayr Pitta</u>													1
<u>Pitta sordida</u> ,													
<u>Hooded Pitta</u>				4				420				426	1045
					2								
ALAUDIDAE													
<u>Alauda arvensis</u> ,													
<u>Skylark</u>	4											4	604
<u>Alauda gulgula</u> ,													
<u>Lesser Skylark</u>													40
<u>Ammomanes phoenicurus</u> ,													
<u>Rufous-tailed Finch-Lark</u>													1

TABLE 5. Page 33

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
<u>Eremopterix grisea</u> ,											2	2	2
<u>Ashy-crowned Finchlark</u>											1	1	24
<u>Galerida cristata</u> ,											1	1	1
<u>Crested Lark</u>											1	1	173
<u>Sykes's Crested Lark</u>											10	10	11
<u>Mirafra assamica</u> ,													
<u>Rufous-winged Bush Lark</u>													
<u>Mirafra erythroptera</u> ,													
<u>Red-winged Bush Lark</u>													
<u>Mirafra javanica</u> ,				7								7	649
<u>Bush Lark</u>													
HIRUNDINIDAE													6
<u>Delichon dasypus</u> ,													
<u>Asiatic House Martin</u>													
<u>Delichon urbica</u> ,												25	7647
<u>House Martin</u>		25											
<u>Hirundo concolor</u> ,													
<u>Dusky Crag Martin</u>													1
<u>Hirundo daurica</u> ,							830	1	10		12	855	4719
<u>Red-rumped Swallow</u>	1	1											
<u>Hirundo rustica</u> ,		4169		1	115		7617	2607	2	3019	199	20910	260878
<u>House Swallow</u>	2716												
<u>Hirundo striolata</u> ,												83	445
<u>Striated Swallow</u>		83											
<u>Hirundo tahitaca</u> ,					1		2	131	11	1192		1344	7363
<u>Pacific Swallow</u>													
<u>Riparia paludicola</u> ,													
<u>Brown-throated Sand Martin</u>		85		7								85	3045
<u>Riparia riparia</u> ,													
<u>Sand Martin</u>	228				1		1255					1484	8016

TABLE 5. Page 34

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
CAMPEPHAGIDAE													
<u>Coracina fimbriata,</u> <u>Lesser Graybird</u>													5
<u>Coracina larvata,</u> <u>Black-faced Graybird</u>													1
<u>Coracina melanoptera,</u> <u>Black-headed Graybird</u>											38	38	40
<u>Coracina melaschista,</u> <u>Dark-gray Cuckoo Shrike</u>													11
<u>Coracina novaehollandiae,</u> <u>Black-faced Cuckoo Shrike</u>							1	2			1	4	9
<u>Coracina ostenta,</u> <u>White-winged Cuckoo Shrike</u>													7
<u>Coracina polioptera,</u> <u>Lesser Cuckoo Shrike</u>													6
<u>Coracina striata,</u> <u>Barred Graybird</u>													21
<u>Hemipus hircundinaceus,</u> <u>Black-winged Flycatcher-shrike</u>								2				2	7
<u>Hemipus picatus,</u> <u>Bar-winged Flycatcher-shrike</u>							1					1	130
<u>Lalage melanoleuca,</u> <u>Black-and-white Triller</u>													4
<u>Lalage nigra,</u> <u>Pied Triller</u>				4	7	31		7	4			56	990
<u>Pericrocotus brevirostris,</u> <u>Scarlet-billed Minivet</u>							1					1	7
<u>Pericrocotus cinnamomeus,</u> <u>Small Minivet</u>											6	6	17
<u>Pericrocotus ethologus,</u> <u>Long-tailed Minivet</u>							1					1	23
<u>Pericrocotus flammeus,</u> <u>Scarlet Minivet</u>							2					2	43

TABLE 5. Page 35

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
<u>Pericrocotus igneus,</u> <u>Fiery Minivet</u>									4			4	4
<u>Pericrocotus roseus,</u> <u>Rosy Minivet</u>							1					1	17
<u>Pericrocotus solaris,</u> <u>Mountain Minivet</u>		1					2					3	23
<u>Tephrodornis gularis,</u> <u>Hook-billed Graybird</u>								1				1	2
<u>Tephrodornis pondiceriana,</u> <u>Common Wood Shrike</u>											34	34	78
<u>Tephrodornis virgatus,</u> <u>Brown-tailed Wood Shrike</u>							1					1	42
DICRURIDAE													
<u>Dicrurus adsimilis,</u> <u>Black Drongo</u>							14				9	23	118
<u>Dicrurus aeneus,</u> <u>Bronzed Drongo</u>							4	5				9	70
<u>Dicrurus annectans,</u> <u>Crow-billed Drongo</u>								48				48	169
<u>Dicrurus balicassius,</u> <u>Balicassiao</u>				2								2	137
<u>Dicrurus caerulescens,</u> <u>White-bellied Drongo</u>													7
<u>Dicrurus hottentottus,</u> <u>Hair-crested Drongo</u>					2							11	160
<u>Dicrurus leucophaeus,</u> <u>Ashy Drongo</u>					2		7				62	73	239
<u>Dicrurus paradiseus,</u> <u>Greater Racquet-tailed Drongo</u>							12	5				17	166
<u>Dicrurus remifer,</u> <u>Lesser Racquet-tailed Drongo</u>							1	8				9	206

TABLE 5. Page 36

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
ORIOLIDAE													
<u>Oriolus chinensis</u>									4	3		7	590
<u>Black-naped Oriole</u>													
<u>Oriolus cruentus</u>													1
<u>Black-and-crimson Oriole</u>													1
<u>Oriolus oriolus</u>													2
<u>Golden Oriole</u>													10
<u>Oriolus tenuirostris</u>													
<u>Slender-billed Oriole</u>													
<u>Oriolus traillii</u>													
<u>Maroon Oriole</u>													
<u>Oriolus xanthonotus</u>									1			1	11
<u>Malaysian Black-headed Oriole</u>													
CORVIDAE													
<u>Cissa chinensis</u>													3
<u>Green Magpie</u>													
<u>Cissa erythrorhynchos</u>													4
<u>Red-billed Blue Magpie</u>													
<u>Cissa thalassina</u>													4
<u>Short-tailed Green Magpie</u>													
<u>Corvus corone</u>												2	13
<u>Carion Crow</u>													
<u>Corvus enca</u>													2
<u>Slender-billed Crow</u>													
<u>Corvus macrorhynchos</u>											1	1	5
<u>Large-billed Crow</u>													
<u>Corvus splendens</u>											7	7	12
<u>House Crow</u>													
<u>Crypsirina formosae</u>													
<u>Grey Treepie</u>			1									1	2
<u>Crypsirina occipitalis</u>													
<u>Malaysian Treepie</u>													10

TABLE 5. Page 37

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
<u>PARIDAE</u>													
<u>Yellow-crested Tit</u>													
<u>Aegithaiscus concinnus</u>													74
<u>Aegithaiscus caudatus</u>												32	539
<u>Parus amabilis</u>	29	3											1
<u>Parus ater</u>	8	1											373
<u>Coal Tit</u>	1		3										46
<u>Parus atricapillus</u>													125
<u>Willow Tit</u>												14	
<u>Parus elegans</u>													
<u>Elegant Titmouse</u>				14									
<u>Blue Magpie</u>		1											22
<u>Blue Jay</u>	7												20
<u>Nucifraga caryocatactes</u>													60
<u>Nutcracker</u>													114
<u>Pica pica</u>													1
<u>Magpie</u>													71
<u>Platylophus galericulatus</u>								2					10
<u>Crested Malay Jay</u>												2	
<u>Platysmurus leucopterus</u>													7
<u>Black-crested Magpie</u>													
<u>Yellow-crested Tit</u>													
<u>Aegithaiscus concinnus</u>													
<u>Aegithaiscus caudatus</u>													
<u>Parus amabilis</u>													
<u>Parus ater</u>													
<u>Coal Tit</u>													
<u>Parus atricapillus</u>													
<u>Willow Tit</u>													
<u>Parus elegans</u>													
<u>Elegant Titmouse</u>													

TABLE 5. Page 38

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
<u>Parus major</u> , Great Tit	9	144								2	1	158	2999
<u>Parus monticolus</u> , Green-backed Tit			11					2				11	123
<u>Parus palustris</u> , Marsh Tit													192
<u>Parus varius</u> , Varied Tit													215
<u>Parus xanthogenys</u> , Yellow-cheeked Tit							2					2	71
<u>Sylviparus modestus</u> , Yellow-browed Tit													1
CERTHIDAE													
<u>Certhia discolor</u> , Brown-throated Treecreeper													19
<u>Certhia familiaris</u> , European Treecreeper													2
<u>Rhabdornis inornatus</u> , Plain-headed Creeper													3
<u>Rhabdornis mystacalis</u> , Striped-headed Creeper						2						2	12
<u>Salpornis spilonotus</u> , Spotted Grey Creeper											1	1	1
SITTIDAE													
<u>Sitta azurea</u> , Blue Nuthatch													7
<u>Sitta castanea</u> , Chestnut-bellied Nuthatch											1	1	18

TABLE 5. Page 39

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
<i>Sitta europaea</i> , European Nuthatch													47
<i>Sitta frontalis</i> , Velvet-fronted Nuthatch							5					5	81
<i>Sitta himalayensis</i> , White-tailed Nuthatch													15
TIMALIIDAE													
<i>Actinodura egertoni</i> , Egerton's Barwing													2
<i>Actinodura morrisoniana</i> , Formosan Barwing			16									16	31
<i>Actinodura ramsayi</i> , Spectacled Barwing													120
<i>Alcippe brunnea</i> , Gould's Nun Babbler													17
<i>Alcippe brunneicauda</i> , Brown-tailed Nun Babbler								3				3	108
<i>Alcippe castaneiceps</i> , Chestnut-headed Nun Babbler								4				4	465
<i>Alcippe cinerea</i> , Yellow-throated Nun Babbler								3				3	3
<i>Alcippe cinereiceps</i> , Brown-headed Nun Babbler			21									21	80
<i>Alcippe morrisonia</i> , Grey-faced Nun Babbler							101					101	1500
<i>Alcippe nipalensis</i> , Mountain Nun Babbler								34				34	631
<i>Alcippe potocephala</i> , Common Nun Babbler							15	13			22	160	563
<i>Alcippe vinipectus</i> , White-browed Nun Babbler													2

TABLE 5. Page 40

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
<u>Chrysomma sinense.</u>							3				29	32	221
<u>Yellow-eyed Babbler</u>													
<u>Dumetia hyperythra.</u>											10	10	41
<u>Rufous-bellied Babbler</u>													
<u>Eupetes macrocorus,</u>													
<u>Rail Babbler</u>													
<u>Campsorhynchus rufulus,</u>													
<u>White-headed Babbler</u>													
<u>Garrulax albogularis,</u>													
<u>White-throated Laughing Thrush</u>													
<u>Garrulax canorus.</u>													
<u>Hwamei</u>			2									2	25
<u>Garrulax chinensis.</u>													
<u>Black-throated Laughing Thrush</u>							1					1	29
<u>Garrulax erythrocephalus</u>													
<u>Red-headed Laughing Thrush</u>								3				3	155
<u>Garrulax leucolophus,</u>													
<u>White-crested Laughing Thrush</u>													
<u>Garrulax lineatus,</u>													
<u>Streaked Laughing Thrush</u>													
<u>Garrulax lugubris,</u>													
<u>Black Laughing Thrush</u>													
<u>Garrulax milnei,</u>													
<u>Red-tailed Laughing Thrush</u>													
<u>Garrulax mitratus,</u>													
<u>Chestnut-capped Laughing Thrush</u>												4	43
<u>Garrulax moniligerus,</u>													
<u>Lesser Necklaced Laughing Thrush</u>													
<u>Garrulax morrisonianus,</u>													
<u>Formosan Laughing Thrush</u>			15									15	46
<u>Garrulax palliatus,</u>													
<u>Gray-and-Brown Laughing Thrush</u>													4

TABLE 5. Page 41

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
<u>Carrulax pectoralis</u> ,													2
Greater Necklaced Laughing Thrush													
<u>Carrulax perspicillatus</u> ,													18
Spectacted Laughing Thrush													
<u>Carrulax poecilorrhynchus</u> ,													3
Rufous Laughing Thrush													
<u>Carrulax strepitans</u> ,							5					5	27
Tickell's Laughing Thrush													
<u>Heterophasia annectens</u> ,							1					1	53
Chestnut-backed Sibia													
<u>Heterophasia auricularis</u> ,													25
White-eared Sibia			5										
<u>Heterophasia capistrata</u> ,													21
Black-headed Sibia													
<u>Heterophasia melanoleuca</u> ,													376
Tickell's Sibia													
<u>Heterophasia picaoides</u> ,													70
Long-tailed Sibia								4				4	
<u>Kenopia striata</u> ,													20
Striped Wren-Babbler								6				6	
<u>Leiothrix argenteauris</u> ,													427
Silver-eared Mesia								46				46	
<u>Leiothrix lutea</u> ,													23
Red-billed Leiothrix													
<u>Liocichla ripponi</u> ,													22
Crimson-headed Liocichla													
<u>Liocichla steerei</u> ,			63									63	226
Steere's Liocichla													
<u>Macronus flavicollis</u> ,													96
Gray-faced Tit Babbler					30							30	
<u>Macronus gularis</u> ,													995
Striped Tit Babbler							43	13				56	

TABLE 5. Page 42

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
<u>Macronus ptilosus</u>								38				38	170
<u>Fluffy-backed Tit Babbler</u>													
<u>Macronus striaticeps</u> ,						52						52	401
<u>Brown Tit Babbler</u>													
<u>Malacocincla sepiaria</u> ,										9		9	9
<u>Horsfield's Brown Babbler</u>													
<u>Malacopteron affine</u> ,								7				7	64
<u>Plain Babbler</u>													
<u>Malacopteron albogulare</u> ,								12				12	36
<u>White-throated Babbler</u>													
<u>Malacopteron cinereum</u> ,								39				39	235
<u>Lesser Red-headed Babbler</u>													
<u>Malacopteron magnirostre</u> ,								27				27	248
<u>Brown-headed Babbler</u>													
<u>Malacopteron magnum</u> ,								24				24	105
<u>Greater Red-headed Babbler</u>													
<u>Minla cyanouroptera</u> ,							1					4	151
<u>Blue-winged Siva</u>													
<u>Minla ignolineta</u> ,													5
<u>Red-tailed Siva</u>													
<u>Minla strigula</u> ,													
<u>Chestnut-tailed Siva</u>													
<u>Myzornis pyrrhoura</u> ,													137
<u>Fire-tailed Myzornis</u>													
<u>Napothera airicularis</u> ,													1
<u>Black-throated Wren-Babbler</u>													
<u>Napothera brevicaudatus</u> ,													
<u>Streaked Wren-Babbler</u>												3	155
<u>Napothera crassa</u> ,													
<u>Mountain Wren-Babbler</u>													
<u>Napothera epilepidotus</u> ,													5
<u>Small Wren-Babbler</u>							9	1				10	36

TABLE 5. Page 41

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
<i>Garrulax pectoralis</i> ,													2
Greater Necklaced Laughing Thrush													
<i>Garrulax perspicillatus</i> ,													18
Spectacled Laughing Thrush													
<i>Garrulax poecilorhynchus</i> ,													3
Rufous Laughing Thrush													
<i>Garrulax strepitans</i> ,							5					5	27
Tickell's Laughing Thrush													
<i>Heterophasia annectens</i> ,							1					1	53
Chestnut-backed Sibia													
<i>Heterophasia auricularis</i> ,													25
White-eared Sibia			5									5	
<i>Heterophasia capistrata</i> ,													21
Black-headed Sibia													
<i>Heterophasia melanoleuca</i> ,													376
Tickell's Sibia													
<i>Heterophasia picaoides</i> ,													70
Long-tailed Sibia								4				4	
<i>Kenopia striata</i> ,													20
Striped Wren-Babbler								6				6	
<i>Leiothrix argenteauris</i> ,													427
Silver-eared Mesia								46				46	
<i>Leiothrix lutea</i> ,													23
Red-billed Leiothrix													
<i>Liocichla ripponi</i> ,													22
Liocichla ripponi													
<i>Liocichla steerei</i> ,													226
Crimson-headed Liocichla													
<i>Steere's Liocichla</i>		63										63	
<i>Macronus flavicollis</i> ,													96
Gray-faced Tit Babbler					30							30	
<i>Macronus gularis</i> ,													995
Striped Tit Babbler							43					56	
								13				56	

TABLE 5. Page 42

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
<u>Macronus ptilosus</u> , <u>Fluffy-backed Tit Babbler</u>								38				38	170
<u>Macronus striaticeps</u> , <u>Brown Tit Babbler</u>						52						52	401
<u>Malococincla sepiaria</u> , <u>Horsfield's Brown Babbler</u>										9		9	9
<u>Malacopteron affine</u> , <u>Plain Babbler</u>								7				7	64
<u>Malacopteron albogulare</u> , <u>White-throated Babbler</u>								12				12	36
<u>Malacopteron cinereum</u> , <u>Lesser Red-headed Babbler</u>								39				39	235
<u>Malacopteron magnirostre</u> , <u>Brown-headed Babbler</u>								27				27	248
<u>Malacopteron magnum</u> , <u>Greater Red-headed Babbler</u>								24				24	105
<u>Minla cyanouroptera</u> , <u>Blue-winged Siva</u>							1	3				4	151
<u>Minla ignolineta</u> , <u>Red-tailed Siva</u>													5
<u>Minla strigula</u> , <u>Chestnut-tailed Siva</u>													137
<u>Myzornis pyrrhoura</u> , <u>Fire-tailed Myzornis</u>													1
<u>Napothera airigularis</u> , <u>Black-throated Wren-Babbler</u>													1
<u>Napothera brevicaudatus</u> , <u>Streaked Wren-Babbler</u>								3				3	155
<u>Napothera crassa</u> , <u>Mountain Wren-Babbler</u>													5
<u>Napothera epilepidotus</u> , <u>Small Wren-Babbler</u>							9	1				10	38

TABLE 5. Page 43

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
<i>Napothera macrodactylus</i> , Large-footed Wren-Babbler								6				6	18
<i>Pellorneum albiventer</i> , Plain Brown Babbler							9	9				18	26
<i>Pellorneum capistratum</i> , Black-capped Babbler							8	4		43		55	182
<i>Pellorneum ruficeps</i> , Striped Babbler													425
<i>Pnoepyga albiventer</i> , Formosan Scaly-breasted Wren													7
<i>Pnoepyga pusilla</i> , Pygmy Wren-Babbler								1				1	5
<i>Pomatorhinus erythrogeus</i> , Rusty-cheeked Scimitar Babbler			2					18				2	52
<i>Pomatorhinus hypoleucos</i> , Large Scimitar Babbler							32	32				64	5
<i>Pomatorhinus montanus</i> , Chestnut-backed Scimitar Babbler										4		4	4
<i>Pomatorhinus ochraceiceps</i> , Ochraceous-headed Scimitar Babbler							2					2	6
<i>Pomatorhinus ruficolus</i> , Rufous-necked Scimitar Babbler			4									4	11
<i>Pomatorhinus schisticeps</i> , Chestnut-naped Scimitar Babbler							3	4		13		16	311
<i>Pteruthius aenobarbus</i> , Chestnut-fronted Shrike-Babbler							3	10				13	8
<i>Pteruthius flaviscapis</i> , Greater Shrike-Babbler													25
<i>Pteruthius melanotis</i> , Black-eared Shrike-Babbler													2
<i>Ptilocichla basitanica</i> , Streaked Ground Babbler						2						2	3
<i>Ptilocichla falcata</i> , Falcated Ground Babbler													3

TABLE 5. Page 44

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
<u>Rhopophilus pekinensis</u> , <u>Chinese Babbler</u>													9
<u>Stachyris capitalis</u> , <u>Rufous-crowned Tree Babbler</u>							14	16				30	139
<u>Stachyris chrysaea</u> , <u>Golden Tree Babbler</u>								45				45	347
<u>Stachyris erythroptera</u> , <u>Red-winged Tree Babbler</u>								3				3	28
<u>Stachyris leucotis</u> , <u>White-eared Tree Babbler</u>								22				22	112
<u>Stachyris maculata</u> , <u>Red-rumped Tree Babbler</u>													1
<u>Stachyris melanothorax</u> , <u>Pearl-cheeked Tree Babbler</u>								35				57	648
<u>Stachyris nigriceps</u> , <u>Gray-throated Tree Babbler</u>							22	19				19	132
<u>Stachyris nigricollis</u> , <u>Black-necked Tree Babbler</u>													6
<u>Stachyris nigrocappitata</u> , <u>Black-crowned Tree Babbler</u>													23
<u>Stachyris plateni</u> , <u>Pygmy Tree Babbler</u>						2						2	311
<u>Stachyris poliocephala</u> , <u>Gray-headed Tree Babbler</u>								33				33	236
<u>Stachyris ruficeps</u> , <u>Red-headed Tree Babbler</u>			30									30	21
<u>Stachyris rufifrons</u> , <u>Hume's Tree Babbler</u>							6					6	41
<u>Stachyris speciosa</u> , <u>Rough-templed Tree Babbler</u>													
<u>Stachyris striolata</u> , <u>Spotted Tree Babbler</u>													

TABLE 5. Page 45

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
<i>Stachyris whiteheadi</i> , Whitehead's Tree Babbler							4					4	35
<i>Timalia pileata</i> , Red-capped Babbler							9	17				26	119
<i>Trichastama abbotti</i> , Abbot's Jungle Babbler								32				32	266
<i>Trichastoma bicolor</i> , Ferruginous Jungle Babbler												7	97
<i>Trichastoma cinereiceps</i> , Ashy-headed Ground Babbler				7								7	21
<i>Trichastoma malaccensis</i> , Short-tailed Babbler								53				53	366
<i>Trichastoma pyrrhogenys</i> , Temminck's Jungle Babbler												1	1
<i>Trichastoma rostratum</i> , Blyth's Jungle Babbler								26				26	141
<i>Trichastoma sepiarium</i> , Horsfield's Jungle Babbler								4				4	40
<i>Trichastoma tickelli</i> , Tickell's Jungle Babbler							7	4				11	85
<i>Turdoides earlei</i> , Striated Babbler												30	118
<i>Turdoides caudatus</i> , Common Babbler										30		30	118
<i>Turdoides malcolmi</i> , Large Grey Babbler										1		1	16
<i>Turdoides striatus</i> , Jungle Babbler										201		201	431
<i>Yuhina bakeri</i> , Baker's Yuhina													2
<i>Yuhina brunneiceps</i> , Formosan Yuhina	95											95	336

TABLE 5. Page 46

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total, 1969	Grand Total
<i>Yuhina castaneiceps</i> , Chestnut-headed Siva							7					7	197
<i>Yuhina flavicollis</i> , Yellow-naped Yuhina													166
<i>Yuhina nigrimanta</i> , Black-chinned Yuhina													3
<i>Yuhina zantholeuca</i> , White-bellied Yuhina							10	1				11	177
PARADOXORNIITHIDAE													
<i>Paradoxornis guttaris</i> , Gray-headed Parrotbill							14					14	172
<i>Paradoxornis guttaticollis</i> , Rufous-headed Parrotbill													19
<i>Paradoxornis nipalensis</i> , Orange Parrotbill			44									44	266
<i>Suthora webbiana</i> , Webb's Parrotbill			5									5	2813
PYCNONOTIDAE													
<i>Criniger bresonae</i> , Olive White-throated Bulbul					6			27				33	439
<i>Criniger finschii</i> , Finsch's Bulbul								12				12	20
<i>Criniger flavovolus</i> , White-throated Bulbul								2				2	26
<i>Criniger ocboraceus</i> , Brown White-throated Bulbul								6				6	610
<i>Criniger pallidus</i> , Swinhoe's White-throated Bulbul							15					15	243

TABLE 5. Page 47

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
<u>Criniger phaeocephalus</u> , Crestless White-throated Bulbul								25				25	268
<u>Hypsipetes amaurotis</u> , Brown-eared Bulbul	22	8						5				35	217
<u>Hypsipetes charlottae</u> , Crested Olive Bulbul				1								1	8
<u>Hypsipetes criniger</u> , Hairy-backed Bulbul								27				27	251
<u>Hypsipetes everetti</u> , Yellow Bulbul					17							17	57
<u>Hypsipetes flavala</u> , Ashy Bulbul							6					6	94
<u>Hypsipetes indicus</u> , Yellow-browed Bulbul											104	104	238
<u>Hypsipetes madagascariensis</u> , Black Bulbul								2			51	53	218
<u>Hypsipetes malaccensis</u> , Malaccan Bulbul													33
<u>Hypsipetes mcclellandii</u> , Mountain Streaked Bulbul							31	5				36	581
<u>Hypsipetes philippinus</u> , Philippine Bulbul									193			226	2340
<u>Hypsipetes propinquus</u> , Olive Bulbul				33									149
<u>Hypsipetes siquijorensis</u> , Mottled-breasted Bulbul													269
<u>Hypsipetes thompsoni</u> , Bingham's Bulbul								1				5	37
<u>Hypsipetes viridescens</u> , Streaked Bulbul										4			16
<u>Pycnonotus atriceps</u> , Black-headed Bulbul				218			1	13				232	1797

TABLE 5. Page 48

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
<u>Pycnonotus aurogaster</u> ,							6					6	308
<u>Black-capped Bulbul</u>													
<u>Pycnonotus bimaculatus</u> ,													1
<u>Orange-spotted Bulbul</u>							176					176	1365
<u>Pycnonotus blanfordi</u> ,													
<u>Blandford's Bulbul</u>							3					17	150
<u>Pycnonotus brunneus</u> ,								14					
<u>Red-eyed Brown Bulbul</u>										6	883	889	1470
<u>Pycnonotus cafer</u> ,													
<u>Red-vented Bulbul</u>													
<u>Pycnonotus cyaniventris</u> ,								5				5	41
<u>Gray-bellied Bulbul</u>													
<u>Pycnonotus erythrophthalmus</u> ,								23				23	219
<u>Lesser Brown Bulbul</u>													
<u>Pycnonotus eutilotus</u> ,								5				5	45
<u>Crested Brown Bulbul</u>													
<u>Pycnonotus finlaysoni</u> ,													
<u>Stripe-throated Bulbul</u>							13	1				14	427
<u>Pycnonotus flavescens</u> ,													
<u>Pale-faced Bulbul</u>							11					11	512
<u>Pycnonotus goiavier</u> ,													
<u>Yellow-vented Bulbul</u>				61		816	2	476	1	33		1389	18727
<u>Pycnonotus jocosus</u> ,													
<u>Red-whiskered Bulbul</u>							13				458	471	1842
<u>Pycnonotus luecogenys</u> ,													
<u>White-checked Bulbul</u>											88	88	223
<u>Pycnonotus luteolus</u> ,													
<u>White-browed Bulbul</u>													
<u>Pycnonotus melanicterus</u> ,											878	878	891
<u>Black-crested Yellow Bulbul</u>							12	4				16	684
<u>Pycnonotus melanoleucos</u> ,													
<u>Black-and-White Bulbul</u>								19				19	33

TABLE 5. Page 49

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
<u>Pycnonotus nieuwenhuisi</u> , Malayan Wattled Bulbul													97
<u>Pycnonotus plumosus</u> , Large Olive Bulbul					73			49				122	1374
<u>Pycnonotus simplex</u> , White-eyed Brown Bulbul								57				57	179
<u>Pycnonotus sinensis</u> , Chinese Bulbul			4									4	1835
<u>Pycnonotus squamatus</u> , Scaly-breasted Bulbul													4
<u>Pycnonotus striatus</u> , Striated Green Bulbul													28
<u>Pycnonotus taiwanus</u> , Styan's Bulbul			11									11	37
<u>Pycnonotus urostictus</u> , Yellow Wattled Bulbul						39						39	220
<u>Pycnonotus xanthorrhous</u> , Anderson's Bulbul													182
<u>Pycnonotus zeylanicus</u> , Yellow-crowned Bulbul								1				1	19
<u>Setornis criniger</u> , Hook-billed Bulbul													6
<u>Spizixos canifrons</u> , Finch-billed Bulbul													168
<u>Spizixos semitorques</u> , Collared Finch-billed Bulbul			1									1	11
AEGITHINIDAE													
<u>Aegithina lafresnayei</u> , Great Iora													15
<u>Aegithina nigrolutea</u> , Marshall's Iora											2	2	13

TABLE 5. Page 50

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
<u>Aegithina tiphia</u> ,								10			172	197	486
Common Iora					5					10		197	486
<u>Aegithina viridissima</u> ,									1			1	17
Green Iora													17
<u>Chloropsis aurifrons</u> ,													48
Golden-fronted Leafbird													48
<u>Chloropsis cochinchinensis</u> ,								10				10	40
Yellow-headed Green Leafbird													40
<u>Chloropsis cyanopogon</u> ,													10
Lesser Green Leafbird													10
<u>Chloropsis hardwickii</u> ,								4				4	24
Hardwick's Leafbird													24
<u>Chloropsis palawanensis</u> ,													29
Palawan Leafbird													29
<u>Chloropsis sonnerati</u> ,								5				5	12
Greater Green Leafbird													12
<u>Irena cyanogaster</u> ,													1
Philippine Fairy Bluebird													1
<u>Irena puella</u> ,					4							15	107
Fairy Bluebird								11				15	107
CINCLIDAE													6
<u>Cinclus pallasii</u> ,													6
Pallas Dipper													6
TROGLODYTIDAE													46
<u>Troglodytes troglodytes</u> ,													46
House Wren													46

TABLE 5. Page 51

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
TURDIDAE													
<u>Brachypteryx leucophris</u>							2					2	102
<u>Lesser Shortwing</u>													86
<u>Brachypteryx montana</u>												3	14
<u>Blue Shortwing</u>													1
<u>Cochoa viridis</u>													
<u>Green Cochoa</u>													
<u>Copsychus luzoniensis</u>				3									
<u>White-eyebrowed Shama</u>													
<u>Copsychus malabaricus</u>							9	39				48	454
<u>Common Shama</u>													
<u>Copsychus niger</u>													58
<u>Palawan Black Shama</u>													
<u>Copsychus pyropygus</u>								3				3	12
<u>Orange-tailed Shama</u>													
<u>Copsychus saularis</u>				3			50	26		1	39	119	1231
<u>Magpie Robin</u>													6
<u>Enicurus immaculatus</u>													
<u>Black-backed Forktail</u>													
<u>Enicurus leschenaulti</u>							4	20		1		25	99
<u>White-crowned Forktail</u>													
<u>Enicurus maculatus</u>													
<u>Spotted Forktail</u>													
<u>Enicurus ruficapillus</u>								6				6	75
<u>Chestnut-naped Forktail</u>													
<u>Enicurus schistaceus</u>													
<u>Slaty-backed Forktail</u>													23
<u>Enicurus scouleri</u>													
<u>Little Forktail</u>													1
<u>Enicurus velatus</u>													
<u>Lesser Forktail</u>										1		1	1
<u>Erithacus akahige</u>													
<u>Japanese Robin</u>													24

TABLE 5. Page 52

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
<u>Erithacus brunnea</u> ,											12	12	89
<u>Indian Blue Robin</u>													
<u>Erithacus calliope</u> ,	1	11	13				13					38	1181
<u>Rubythroat</u>													
<u>Erithacus chrysaeus</u> ,													
<u>Golden Bush Robin</u>													2
<u>Erithacus cyane</u> ,		2						289				293	1387
<u>Siberian Blue Robin</u>													
<u>Erithacus pectoralis</u> ,													
<u>Himalayan Rubythroat</u>													6
<u>Erithacus sibilans</u>													
<u>Red-tailed Robin</u>	1											1	45
<u>Erithacus svecicus</u> ,													
<u>Bluethroat</u>							5				74	79	354
<u>Monticola einclorhynchus</u> ,													
<u>Blue-headed Rock Thrush</u>													58
<u>Monticola gularis</u> ,													
<u>White-throated Rock Thrush</u>													8
<u>Monticola rufiventris</u> ,													
<u>Chestnut-bellied Rock Thrush</u>													2
<u>Monticola solitaria</u> ,													
<u>Blue Rock Thrush</u>		2	55									57	354
<u>Myiomela diana</u> ,													
<u>Sunda Blue Robin</u>										5		5	18
<u>Myiomela leucura</u> ,													
<u>White-tailed Blue Robin</u>													
<u>Myophonus coeruleus</u> ,			10									16	270
<u>Blue Whistling Thrush</u>													
<u>Myophonus glaucinus</u> ,													
<u>Sunda Whistling Thrush</u>													
<u>Myophonus horsfieldii</u> ,													
<u>Formosan Whistling Thrush</u>													
<u>Myophonus robinsoni</u> ,													
<u>Malayan Whistling Thrush</u>								1				1	3

TABLE 5. Page 53

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
<u>Phoenicurus auroreus</u> ,		6										6	460
<u>Daurian Redstart</u>													5
<u>Phoenicurus frontalis</u> ,													
<u>Blue-fronted Redstart</u>													
<u>Phoenicurus ochrurus</u> ,		3									110	113	200
<u>Black Redstart</u>													1
<u>Rhyacornis fuliginosus</u> ,													
<u>Plumbeous Redstart</u>													
<u>Saxicola caprata</u> ,						5	2			16		23	258
<u>Pied Stonechat</u>													
<u>Saxicola ferrea</u> ,							7					7	127
<u>Grey Bushchat</u>													
<u>Saxicola fulicata</u> ,													
<u>Indian Robin</u>											10	10	54
<u>Saxicola jerdoni</u> ,													
<u>Jerdon's Bushchat</u>													2
<u>Saxicola torquata</u> ,													
<u>Stonechat</u>	11	16					14			6		47	655
<u>Tarsiger cyanurus</u> ,													
<u>Red-flanked Bluetail</u>		5										5	267
<u>Tarsiger indicus</u> ,													
<u>White-browed Bush Robin</u>			55									55	103
<u>Tarsiger johnstoniae</u> ,													
<u>Johnston's Bush Robin</u>			57									57	150
<u>Turdus cardis</u> ,													
<u>Grey Thrush</u>		18										18	278
<u>Turdus celaenops</u> ,													
<u>Seven Islands Thrush</u>													
<u>Turdus chrysolaus</u> ,													
<u>Brown Thrush</u>		4										4	627
<u>Turdus dissimilis</u> ,													
<u>Black-breasted Thrush</u>													1
<u>Turdus hortulorum</u> ,													
<u>Grey-backed Thrush</u>													215

TABLE 5. Page 54

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
<i>Turdus merula</i> , Blackbird											227	227	340
<i>Turdus naumanni</i> , Dusky Thrush	2	4						5				6	196
<i>Turdus obscurus</i> , Grey-headed Thrush												5	232
<i>Turdus pallidus</i> , Pale Thrush		7	3									10	316
<i>Turdus poliocephalus</i> , Island Thrush													10
<i>Turdus ruficollis</i> , Red-throated Thrush													24
<i>Zoothera andromedae</i> , Sunda Ground Thrush													1
<i>Zoothera cinerea</i> , Ashy Ground Thrush				1								1	136
<i>Zoothera citrina</i> , Orange-headed Thrush								20		3	158	181	252
<i>Zoothera dauma</i> , White's Ground Thrush		1					1					2	87
<i>Zoothera dixonii</i> , Long-tailed Ground Thrush													1
<i>Zoothera everetti</i> , Everett's Ground Thrush													1
<i>Zoothera interpres</i> , Chestnut-headed Ground Thrush										4		4	10
<i>Zoothera marginata</i> , Lesser Long-billed Ground Thrush							2					2	24
<i>Zoothera sibirica</i> , Siberian Ground Thrush								8		1		9	266
<i>Zoothera wardii</i> , Pied Ground Thrush											6	6	6

TABLE 5. Page 55

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
SYLVIIDAE													
<u>Abroscopus superciliosus</u> ,													11
<u>Yellow-bellied Flycatcher Warbler</u>													
<u>Acrocephalus agricola</u> ,											5	5	6
<u>Paddy-field Warbler</u>													
<u>Acrocephalus arundinaceus</u> ,					25			71	8			207	4726
<u>Great Reed Warbler</u>	1	58	40				4						
<u>Acrocephalus bistrigiceps</u> ,													
<u>Von Schenck's Reed Warbler</u>		260					3					263	1332
<u>Acrocephalus concinens</u> ,													
<u>Brown Paddy-field Warbler</u>							1					1	8
<u>Acrocephalus dumetorum</u> ,													
<u>Blyth's Reed Warbler</u>											95	95	154
<u>Acrocephalus songophilus</u> ,													
<u>Speckled Reed Warbler</u>													
<u>Acrocephalus stentoreus</u> ,													
<u>Southern Great Reed Warbler</u>													
<u>Bradypterus caudatus</u> ,													
<u>Long-tailed Ground Warbler</u>													
<u>Bradypterus luteoventris</u> ,													
<u>Brown Bush Warbler</u>													
<u>Cettia acanthizoides</u> ,													
<u>Yellow-bellied Bush Warbler</u>			27									27	164
<u>Cettia brunnifrons</u> ,													
<u>Rufous-capped Bush Warbler</u>													
<u>Cettia canturians</u> ,													
<u>Singing Bush Warbler</u>													
<u>Cettia diphone</u> ,													
<u>Bush Warbler</u>	2	73	1									76	1293
<u>Cettia montanus</u> ,													
<u>Mountain Bush Warbler</u>			3									3	28
<u>Cettia pallidipes</u> ,													
<u>Pale-footed Bush Warbler</u>													6

TABLE 5. Page 56

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
<u>Cettia squameiceps</u> , Short-tailed Bush Warbler							7					7	161
<u>Cettia whiteheadi</u> , Whitehead's Bush Warbler													7
<u>Cisticola exilis</u> , Rufous-headed Fantail Warbler			3	1								4	21
<u>Cisticola juncidis</u> , Streaked Fantail Warbler			8			92		4				104	565
<u>Gerygone fusca</u> , Flyeater				11				3				14	46
<u>Hippolais caligata</u> , Booted Warbler											24	24	30
<u>Locustella certhiola</u> , Pallas Grasshopper Warbler								14		1		15	855
<u>Locustella fasciolata</u> , Gray's Grasshopper Warbler				2								3	109
<u>Locustella lanceolata</u> , Streaked Grasshopper Warbler				22				24				47	3562
<u>Locustella ochotensis</u> , Middendorff's Grasshopper Warbler												59	592
<u>Megalurus palustris</u> , Striated Canegrass Warbler				7								11	122
<u>Megalurus timoriensis</u> , Rufous-capped Canegrass Warbler												11	52
<u>Orthotomus atrogularis</u> , Black-necked Tailorbird				6				28				69	548
<u>Orthotomus cinereiceps</u> , White-eared Tailorbird													4
<u>Orthotomus cucullatus</u> , Mountain Tailorbird								25				25	104
<u>Orthotomus nigriceps</u> , Black-headed Tailorbird												1	13

TABLE 5. Page 57

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
<u>Orthotomus ruficeps</u> , Red-headed Tailorbird								55		8		63	336
<u>Orthotomus sericeus</u> , Red-tailed Tailorbird					3		1	15				22	447
<u>Orthotomus sutorius</u> , Long-tailed Tailorbird							87	24	3		132	246	619
<u>Pragmaticola aedon</u> , Thick-billed Warbler							9			1		10	192
<u>Phylloscopus affinis</u> , Tickell's Willow Warbler													8
<u>Phylloscopus armandii</u> , Buff-browed Willow Warbler													5
<u>Phylloscopus borealis</u> , Arctic Willow Warbler			2	13		5	11	85	6	2		135	1905
<u>Phylloscopus cebuensis</u> , Yellow-faced Willow Warbler		10											19
<u>Phylloscopus collybita</u> , Chiffchaff											128	128	387
<u>Phylloscopus coronatus</u> , Crowned Willow Warbler							8	132				140	450
<u>Phylloscopus davisoni</u> , White-tailed Willow Warbler							14					14	107
<u>Phylloscopus fuscatus</u> , Dusky Willow Warbler							23					23	354
<u>Phylloscopus griseolus</u> , Olivaceous Willow Warbler											19	19	19
<u>Phylloscopus inornatus</u> , Yellow-browed Willow Warbler							112	1			2	115	285
<u>Phylloscopus maculipennis</u> , Grey-faced Willow Warbler											1	1	6
<u>Phylloscopus occipitalis</u> , Greater Crowned Willow Warbler		10										11	630

TABLE 5. Page 58

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
<u>Phylloscopus olivaceus</u> ,												10	516
<u>Philippine Willow Warbler</u>						7	1					3	39
<u>Phylloscopus proregulus</u> ,				3							2		36
<u>Pallas Willow Warbler</u>													112
<u>Phylloscopus pulcher</u> ,												46	17
<u>Orange-barrred Willow Warbler</u>							46					2	2
<u>Phylloscopus reguloides</u> ,													329
<u>Blyth's Crowned Willow Warbler</u>							2					8	19
<u>Phylloscopus schwarzi</u> ,												6	277
<u>Radde's Willow Warbler</u>												262	22
<u>Phylloscopus subaffinis</u> ,													3
<u>Grant's Willow Warbler</u>												57	77
<u>Phylloscopus tenellipes</u> ,												37	657
<u>Pale-legged Willow Warbler</u>													231
<u>Phylloscopus trivirgatus</u> ,							5					11	5
<u>Green Willow Warbler</u>													134
<u>Phylloscopus trochiloides</u> ,								3					36
<u>Dull Green Willow Warbler</u>							3						13
<u>Prinia atrogularis</u> ,							5						
<u>White-breasted Wren Warbler</u>													
<u>Prinia buchanani</u> ,													
<u>Rufous-fronted Wren Warbler</u>													
<u>Prinia familiaris</u> ,													
<u>Bar-winged Wren Warbler</u>													
<u>Prinia flaviventris</u> ,													
<u>Yellow-bellied Wren Warbler</u>													
<u>Prinia hodgsoni</u> ,									34				
<u>Franklin's Wren Warbler</u>													
<u>Prinia polychroa</u> ,													
<u>Brown Hill Warbler</u>													
<u>Prinia rufescens</u> ,													
<u>Rufescent Wren Warbler</u>													
<u>Prinia socialis</u> ,													
<u>Ashy Long-tailed Warbler</u>							10	1			13		

TABLE 5. Page 59

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
<i>Prinia subflava</i> , Brown Wren Warbler							3				15	18	288
<i>Prinia sylvatica</i> , Woodland Wren Warbler											1	1	3
<i>Regulus ignicapillus</i> , Firecrest			4									4	15
<i>Regulus regulus</i> , Goldcrest			1									1	389
<i>Seicercus albobularis</i> , White-throated Flycatcher Warbler			6									6	12
<i>Seicercus burkii</i> , Yellow-eyed Flycatcher Warbler							45					45	313
<i>Seicercus castaneiceps</i> , Chestnut-headed Flycatcher Warbler								4				4	20
<i>Seicercus montis</i> , Yellow-breasted Flycatcher Warbler													27
<i>Seicercus superciliosus</i> , Yellow-bellied Flycatcher Warbler								6				6	25
<i>Seicercus xanthoschistus</i> , Grey-headed Flycatcher Warbler													3
<i>Sylvia curruca</i> , Lesser Whitethroat											496	496	753
<i>Sylvia hortensis</i> , Orphean Warbler											5	5	16
<i>Tesia castaneocoronata</i> , Chestnut-headed Ground Warbler													1
<i>Tesia olivacea</i> , Bright Slaty-bellied Ground Warbler													1
MUSCICAPIDAE													
<i>Culicicapa ceylonensis</i> , Gray-headed Flycatcher							26					26	348
<i>Culicicapa helianthea</i> , Citrine Canary Flycatcher													6

TABLE 5. Page 60

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
<u>Hypothymis azurea</u> , Black-naped Blue Flycatcher			4	3	6	18	12	27			62	132	625
<u>Muscicapa banyumas</u> , Hill Blue Flycatcher							11			2		13	419
<u>Muscicapa basilanica</u> , Little Slaty Flycatcher													1
<u>Muscicapa caerulata</u> , Large-billed Blue Flycatcher													2
<u>Muscicapa concreta</u> , White-tailed Blue Flycatcher								2				2	25
<u>Muscicapa cyanomelana</u> , Japanese Blue Flycatcher		2										2	330
<u>Muscicapa dumetoria</u> , Orange-breasted Flycatcher								24				24	70
<u>Muscicapa grandis</u> , Niltava								13				13	260
<u>Muscicapa griseisticta</u> , Gray-spotted Flycatcher													76
<u>Muscicapa hainana</u> , Hainan Blue Flycatcher							2					2	42
<u>Muscicapa herioti</u> , Blue-breasted Flycatcher				6								6	6
<u>Muscicapa hodgsoni</u> , Rusty-breasted Blue Flycatcher							1					1	18
<u>Muscicapa hyperythra</u> , Rufous-breasted Blue Flycatcher			7			2					2	13	146
<u>Muscicapa indigo</u> , Indigo Flycatcher													3
<u>Muscicapa latirostris</u> , Brown Flycatcher													398
<u>Muscicapa leucomelanura</u> , Slaty Blue Flycatcher		5						95				154	5
<u>Muscicapa macgrigoriae</u> , Small Niltava													32

TABLE 5. Page 61

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
<u>Muscicapa muttui</u> , Brown-breasted Flycatcher											24	24	24
<u>Muscicapa monileger</u> , White Gorgetted Flycatcher							18					18	117
<u>Muscicapa mugimaki</u> , Mugimaki Flycatcher	1							2				3	47
<u>Muscicapa narcissina</u> , Narcissus Flycatcher							1					1	464
<u>Muscicapa pallipes</u> , White-bellied Blue Flycatcher										37		37	57
<u>Muscicapa panayensis</u> , Panay Flycatcher				1								1	20
<u>Muscicapa parva</u> , Red-breasted Flycatcher							30			22		52	230
<u>Muscicapa platanae</u> , Palawan Flycatcher					1							1	3
<u>Muscicapa polioyensis</u> , Brook's Flycatcher													1
<u>Muscicapa rubeculoides</u> , Blue-throated Flycatcher							1	43			78	122	179
<u>Muscicapa rufigastera</u> , Mangrove Blue Flycatcher				4				10				14	424
<u>Muscicapa rufilata</u> , Ferruginous Flycatcher			11					26				37	124
<u>Muscicapa sibirica</u> , Siberian Flycatcher				1				10				11	58
<u>Muscicapa solitaria</u> , White-throated Flycatcher													55
<u>Muscicapa strophiaata</u> , Orange-gorgeted Flycatcher													27
<u>Muscicapa sundara</u> , Blue-and-Orange Flycatcher							20					20	310
<u>Muscicapa thalassina</u> , Verditer Flycatcher							4	1				5	128

TABLE 5. Page 62

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
<u>Muscicapa tickelliae</u> , Tickell's Blue Flycatcher								2			42	44	162
<u>Muscicapa turcosa</u> , Malaysian Blue Flycatcher								3				3	1
<u>Muscicapa unicolor</u> , Pale-blue Flycatcher													8
<u>Muscicapa venusta</u> , Bornean Blue Flycatcher													4
<u>Muscicapa vivida</u> , Rufous-bellied Blue Flycatcher													2
<u>Muscicapa westermanni</u> , Little Pied Flycatcher							3					3	31
<u>Muscicapa zanthopygia</u> , Tricolor Flycatcher	1						2	203	4			210	480
<u>Philetoma pyrrhoptera</u> , Chestnut-winged Flycatcher								26				26	166
<u>Philetoma velata</u> , Maroon-breasted Flycatcher								2				2	12
<u>Rhinomyias brunneata</u> , Migratory Jungle Flycatcher								184				184	495
<u>Rhinomyias gularis</u> , White-browed Jungle Flycatcher													68
<u>Rhinomyias olivacea</u> , Olive-backed Jungle Flycatcher													54
<u>Rhinomyias ruficauda</u> , Rufous-tailed Jungle Flycatcher						3						3	9
<u>Rhinomyias umbratilis</u> , White-throated Jungle Flycatcher												6	81
<u>Rhipidura albicollis</u> , White-throated Fantail Flycatcher							27	3				30	332
<u>Rhipidura albogularis</u> , White-spotted Fantail Flycatcher											5	5	10
<u>Rhipidura aureola</u> , White-browed Fantail Flycatcher													2

TABLE 5. Page 63

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
<u>Rhipidura cyaniceps</u> , Blue-headed Fantail Flycatcher				21								21	122
<u>Rhipidura euryura</u> , White-bellied Fantail Flycatcher										1		1	3
<u>Rhipidura hypoxantha</u> , Yellow-bellied Fantail Flycatcher													15
<u>Rhipidura javanica</u> , Pied Fantail Flycatcher				18			81	37	20	5		161	1431
<u>Rhipidura nigrocinnamomea</u> , Black-and-cinnamon Fantail													3
<u>Rhipidura perlata</u> , Spotted Fantail Flycatcher								1				1	10
<u>Rhipidura phoenicura</u> , Red-tailed Fantail Flycatcher										1		1	2
<u>Rhipidura superciliaris</u> , Blue Fantail Flycatcher						2						2	11
<u>Saxicoloides fulvicata</u> , Indian Robin											12	12	12
<u>Terpsiphone atrocaudata</u> , Japanese Paradise Flycatcher			6					1				10	99
<u>Terpsiphone cinnamomea</u> , Rufous Paradise Flycatcher													6
<u>Terpsiphone cyanescens</u> , Blue Paradise Flycatcher					23							23	93
<u>Terpsiphone paradisi</u> , Paradise Flycatcher								85			180	215	373
PACHYCEPHALIDAE													
<u>Pachycephala cinerea</u> , Mangrove Whistler								3	1			4	133
<u>Pachycephala hypoxantha</u> , Bornean Mountain Whistler													10

TABLE 5. Page 64

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
<i>Pachycephala philippensis</i> , Yellow-bellied Whistler						1						1	40
<i>Pachycephala plateni</i> , White-bellied Whistler				1								1	1
PRUNELLIDAE													
<i>Prunella collaris</i> , Alpine Accentor		3										3	9
<i>Prunella montanella</i> , Mountain Accentor	1											1	154
<i>Prunella rubida</i> , Japanese Accentor													6
MOTACILLIDAE													
<i>Anthus gustavi</i> , Petchora Pipit													24
<i>Anthus hodgsoni</i> , Indian Tree Pipit		5	20	7	7		10					58	2315
<i>Anthus novaeseelandiae</i> , Richard's Pipit				1	18		21	11			2	53	900
<i>Anthus spinoletta</i> , Water Pipit													37
<i>Anthus trivialis</i> , European Tree Pipit													8
<i>Dendronanthus indicus</i> , Forest Wagtail							159	1			35	195	713
<i>Motacilla alba</i> , Pied Wagtail	579	212	8		2		224				1	1026	26581
<i>Motacilla cinerea</i> , Gray Wagtail	6	3	3	12			502					526	1724
<i>Motacilla citreola</i> , Yellow-headed Wagtail											4	4	49

TABLE 5. Page 65

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
<u>Motacilla flava</u> Yellow Wagtail		506		91			1461	1			26	2085	41631
<u>Motacilla grandis</u> Japanese Wagtail													24
<u>Motacilla maderaspatensis</u> Large Pied Wagtail													1
BOMBYCILLIDAE													
<u>Bombycilla garrula</u> Waxwing													40
ARTAMIDAE													
<u>Artamus fuscus</u> Ashy Wood Swallow													4
<u>Artamus leucorhynchus</u> White-breasted Wood Swallow				1		2				1		4	199
LANIIDAE													
<u>Lanius bucephalus</u> Bull-headed Shrike	1	96										97	1241
<u>Lanius collurio</u> Chestnut-backed Shrike													16
<u>Lanius cristatus</u> Brown Shrike	3	1	5960	75	2	9	10	26	4	1	92	6183	35073
<u>Lanius nasutus</u> Black-headed Shrike						3						3	90
<u>Lanius schach</u> Schach Shrike													184
<u>Lanius tephronotus</u> Tibetan Shrike				1						5	10	16	6

TABLE 5. Page 66

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
<u>Lanius tigrinus</u> , Thick-billed Shrike	6							87				93	265
<u>Lanius validirostris</u> , Strong-billed Shrike											53	53	53
<u>Lanius vittatus</u> , Bay-backed Shrike											53	53	104
STURNIDAE													
<u>Ampeliceps coronatus</u> , Gold-crested Myna													6
<u>Aplonis panayensis</u> , Philippine Glossy Starling				10	61	128		1	4			204	1829
<u>Gracula religiosa</u> , Hill Myna										11		11	2
<u>Gracupica melanoptera</u> , Javan Myna						43						45	611
<u>Sarcops calvus</u> , Coloto				2								12	53
<u>Sturnus burmannicus</u> , Jerdon's Starling							12					13	646
<u>Sturnus cineraceus</u> , Grey Starling		13										181	468
<u>Sturnus contra</u> , Pied Starling							26			13		1	197
<u>Sturnus ginginianus</u> , Bank Myna											1	41	185
<u>Sturnus javanicus</u> , Crested Myna							41					36	98
<u>Sturnus mahrattensis</u> , Jungle Myna													7
<u>Sturnus malabaricus</u> , Ashy-headed Starling							19				17	36	98

TABLE 5. Page 67

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
<u>Sturnus nigricollis</u> ,							38					38	106
<u>Black-collared Starling</u>													
<u>Sturnus pagodarum</u> ,							388					388	643
<u>Black-headed Myna</u>													
<u>Sturnus philippensis</u> ,		4										4	140
<u>Violet-backed Starling</u>											54	54	60
<u>Sturnus roseus</u> ,													
<u>Rosy Pastor</u>													
<u>Sturnus sericeus</u> ,													
<u>Silky Starling</u>													1
<u>Sturnus sinensis</u> ,													
<u>Chinese Starling</u>													203
<u>Sturnus sturninus</u> ,	17											19	233
<u>Daurian Starling</u>								2					
<u>Sturnus tristis</u> ,													
<u>Common Myna</u>							3	12	16		105	136	304
<u>Sturnus vulgaris</u> ,													
<u>European Starling</u>													25
NECTARINIDAE													
<u>Aethopyga boltoni</u> ,													3
<u>Apo Sunbird</u>													
<u>Aethopyga christinae</u> ,													1
<u>Fork-tailed Sunbird</u>													
<u>Aethopyga eximia</u> ,													1
<u>Kuhl's Sunbird</u>													
<u>Aethopyga gouldiae</u> ,													
<u>Gould's Sunbird</u>													
<u>Aethopyga mystacalis</u> ,													315
<u>Scarlet Sunbird</u>													
<u>Aethopyga nipalensis</u> ,													4
<u>Green-tailed Sunbird</u>													31

TABLE 5. Page 68

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
<u>Aethopyga pulcherrima</u> , Mountain Sunbird				1								1	4
<u>Aethopyga saturata</u> , Black-breasted Sunbird							4	17				21	100
<u>Aethopyga shelleyi</u> , Lovely Sunbird					1							1	29
<u>Aethopyga siparaja</u> , Yellow-backed Sunbird								2			1	3	127
<u>Anthreptes malacensis</u> , Brown-throated Sunbird					4	10	8	65	36	13		136	1159
<u>Anthreptes rhodolaema</u> , Rufous-throated Sunbird													6
<u>Anthreptes simplex</u> , Plain-colored Sunbird								5				5	51
<u>Anthreptes singalensis</u> , Ruby-cheeked Sunbird							1	1				2	54
<u>Arachnothera affinis</u> , Gray-breasted Spiderhunter								5				5	184
<u>Arachnothera chrysogens</u> , Lesser Yellow-eared Spiderhunter													6
<u>Arachnothera clarae</u> , Naked-faced Spiderhunter									1			1	6
<u>Arachnothera crassirostris</u> , Thick-billed Spiderhunter						1							3
<u>Arachnothera flavigaster</u> , Greater Yellow-eared Spiderhunter								1				1	3
<u>Arachnothera longirostris</u> , Little Spiderhunter					9	25	16	134	28	40		252	3707
<u>Arachnothera magna</u> , Streaked Spiderhunter													65
<u>Arachnothera robusta</u> , Long-billed Spiderhunter							1					1	1

TABLE 5. Page 69

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
<u>Hypogramma hopogrammica</u> , <u>Purple-naped Sunbird</u>								18	3			21	239
<u>Nectarinia asiatica</u> , <u>Purple Sunbird</u>								25			199	199	455
<u>Nectarinia chalcostetha</u> , <u>Macklot's Sunbird</u>											25	25	143
<u>Nectarinia jugularis</u> , <u>Yellow-breasted Sunbird</u>				5	7	110	6	1	18	27	174	174	1087
<u>Nectarinia lotenia</u> , <u>Loten's Sunbird</u>													2
<u>Nectarinia minima</u> , <u>Small Sunbird</u>											21	21	36
<u>Nectarinia sperata</u> , <u>Van Hasselt's Sunbird</u>					4	71					75	75	166
<u>Nectarinia zeylonica</u> , <u>Purple-rumped Sunbird</u>										45	45	45	86
DICAETIDAE													
<u>Dicaeum agile</u> , <u>Thick-billed Flowerpecker</u>											1	1	34
<u>Dicaeum anthonyi</u> , <u>Yellow-crowned Flowerpecker</u>													2
<u>Dicaeum australe</u> , <u>Philippine Flowerpecker</u>				4							97	97	692
<u>Dicaeum bicolor</u> , <u>Bicolored Flowerpecker</u>						3					3	3	78
<u>Dicaeum celebicum</u> , <u>Black-sided Flowerpecker</u>													1
<u>Dicaeum chrysorrheum</u> , <u>Yellow-vented Flowerpecker</u>								1			1	1	15
<u>Dicaeum concolor</u> , <u>Plain Flowerpecker</u>					1			1			2	2	11

TABLE 5. Page 70

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
<u>Dicaeum cruentatum</u> , Scarlet-backed Flowerpecker							6	6				12	131
<u>Dicaeum erythrorhynchos</u> , Tickell's Flowerpecker											11	11	15
<u>Dicaeum hypoleucum</u> , White-bellied Flowerpecker						2						2	77
<u>Dicaeum ignipectus</u> , Fire-breasted Flowerpecker													11
<u>Dicaeum pygmaeum</u> , Pygmy Flowerpecker													40
<u>Dicaeum sanguinolentum</u> , Javan Fire-breasted Flowerpecker								2				2	15
<u>Dicaeum trigonostigma</u> , Orange-breasted Flowerpecker						183		2	1			186	1105
<u>Dicaeum trochileum</u> , Scarlet-headed Flowerpecker										11		11	26
<u>Prinophilus johannae</u> , Palawan Yellow-rumped Flowerpecker					1							1	53
<u>Prinophilus maculatus</u> , Yellow-throated Flowerpecker								40	19			59	437
<u>Prinophilus olivaceus</u> , Olive-backed Flowerpecker						14						14	52
<u>Prinophilus percussus</u> , Crimson-breasted Flowerpecker								50				50	75
<u>Prinophilus thoracicus</u> , Scarlet-breasted Flowerpecker								16				16	37
<u>Prinophilus xanthopygius</u> , Yellow-rumped Flowerpecker													19
ZOSTEROPIDAE													
<u>Chlorocharis emilliae</u> , Mountain Blackeye													142

TABLE 5. Page 71

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
<u>Zosterops erythropleura</u> , <u>Chestnut-flanked White-eye</u>							9					9	391
<u>Zosterops everetti</u> , <u>Everetts White-eye</u>						157						157	509
<u>Zosterops japonica</u> , <u>Chinese White-eye</u>	26	6										32	589
<u>Zosterops javanica</u> , <u>Javan Zosterops</u>										1		1	1
<u>Zosterops montana</u> , <u>Mountain White-eye</u>													34
<u>Zosterops nigrorum</u> , <u>Yellow White-eye</u>				16		15						31	480
<u>Zosterops palpebrosa</u> , <u>Oriental White-eye</u>							13	8		4	21	46	1083
FRINGILLIDAE													
<u>Carduelis flammea</u> , <u>Common Redpoll</u>													217
<u>Carduelis sinica</u> , <u>Oriental Greenfinch</u>	328											328	5034
<u>Carduelis spinus</u> , <u>Siskin</u>	597											597	3605
<u>Carpodacus erythrinus</u> , <u>Common Rose Finch</u>							44				84	128	671
<u>Carpodacus roseus</u> , <u>Pallas Rose Finch</u>													218
<u>Carpodacus vinaceus</u> , <u>Vinaceous Rose Finch</u>			19									19	113
<u>Coccothraustes coccothraustes</u> , <u>Hawfinch</u>													357
<u>Emberiza aureola</u> , <u>Yellow-breasted Bunting</u>							864					864	7223
<u>Emberiza chrysophrys</u> , <u>Yellow-browed Bunting</u>													18

TABLE 5. Page 72

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
<u>Emberiza cioides</u> ,		104										104	3955
<u>Meadow Bunting</u>													
<u>Emberiza elegans</u> ,		1										7	3191
<u>Yellow-throated Bunting</u> 6													
<u>Emberiza fucata</u> ,		94										94	1200
<u>Gray-hooded Bunting</u>													
<u>Emberiza leucocephalus</u> ,													
<u>Pine Bunting</u>													9
<u>Emberiza pusilla</u> ,													68
<u>Little Bunting</u>													
<u>Emberiza rustica</u> ,		1079										1335	63663
<u>Rustic Bunting</u>	256												
<u>Emberiza rutila</u> ,												1128	47691
<u>Chestnut Bunting</u>	1078						50						
<u>Emberiza schoeniclus</u> ,		1375										1375	5090
<u>Common Reed Bunting</u>													
<u>Emberiza spodocephala</u> ,		487	759									1253	21436
<u>Black-faced Bunting</u>	7												
<u>Emberiza stewarti</u> ,											32	32	34
<u>White-capped Bunting</u>													
<u>Emberiza sulphurata</u> ,		13	8									22	1080
<u>Japanese Yellow Bunting</u>				1									
<u>Emberiza tristrami</u> ,												60	2037
<u>Tristram's Bunting</u>	60												
<u>Emberiza variabilis</u> ,		21										21	69
<u>Grey Bunting</u>													
<u>Emberiza yessoensis</u> ,		10										10	391
<u>Japanese Reed Bunting</u>													
<u>Eophona migratoria</u> ,													
<u>Migratory Chinese Grosbeak</u>													149
<u>Eophona personata</u> ,												1	1
<u>Japanese Grosbeak</u>	1												
<u>Fringilla montifringilla</u> ,		16										17	416
<u>Brambling</u>	1												

TABLE 5. Page 73

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
<u>Haematospiza sipahi</u> , <u>Scarlet Finch</u>													5
<u>Loxia curvirostra</u> , <u>Red Crossbill</u>	408											408	450
<u>Loxia leucoptera</u> , <u>White-winged Crossbill</u>													3
<u>Melophus lathamii</u> , <u>Crested Bunting</u>											8	8	24
<u>Pyrrhula erythaca</u> , <u>Beavan's Bullfinch</u>			4									4	48
<u>Pyrrhula nipalensis</u> , <u>Brown Bullfinch</u>			9									9	15
<u>Pyrrhula pyrrhula</u> , <u>Bullfinch</u>	25											25	153
<u>Uragus sibiricus</u> , <u>Long-tailed Rose Finch</u>	30											30	394
PLOCEIDAE													
<u>Erythrura hyperythra</u> , <u>Bamboo Parrot-finch</u>													7
<u>Erythrura prasina</u> , <u>Pin-tailed Parrot-finch</u>							995	12				1007	1228
<u>Estrilda amandava</u> , <u>Red Avadavat</u>												7	140
<u>Lonchura ferruginosa</u> , <u>Chestnut Munia</u>				6									963
<u>Lonchura fuscans</u> , <u>Dusky Munia</u>													285
<u>Lonchura leucogastra</u> , <u>White-bellied Munia</u>				20		2098		1				2119	6860
<u>Lonchura leucogastroides</u> , <u>Javanese Munia</u>									6			81	144

TABLE 5. Page 74

Species	Korea	Japan	Taiwan	Luzon	Palawan	Mindanao	Thailand	Malaya	Singapore	Indonesia	India	Total 1969	Grand Total
<u>Lonchura maja</u> ,								1	21			22	588
<u>White-headed Munia</u>													
<u>Lonchura malabarica</u> ,											45	45	91
<u>White-throated Munia</u>													
<u>Lonchura malacca</u> ,						9146						9152	23045
<u>Chestnut Munia</u>	5		1										
<u>Lonchura punctulata</u> ,			2	30			10	3	24	111	26	206	6516
<u>Spotted Munia</u>													
<u>Lonchura striata</u> ,			3				37	7				47	2111
<u>Sharp-tailed Munia</u>													
<u>Padda oryzivora</u> ,									1	136		141	261
<u>Java Sparrow</u>		1		3									
<u>Passer domesticus</u> ,											2397	2397	4934
<u>European House Sparrow</u>													
<u>Passer flaveolus</u> ,													
<u>Pegu Sparrow</u>												63	765
<u>Passer hispaniolensis</u> ,							63						
<u>Spanish Sparrow</u>													
<u>Passer montanus</u> ,											2517	2517	5768
<u>Passer montanus</u> ,													
<u>Tree Sparrow</u>		1805	1				150	1	386	83		2427	14826
<u>Passer rutilans</u> ,													
<u>Russet Sparrow</u>		27										27	93
<u>Petronia xanthocollis</u> ,													
<u>Yellow-throated Sparrow</u>											643	643	881
<u>Ploceus benghalensis</u> ,													
<u>Black-throated Weaver Bird</u>													16
<u>Ploceus hypoxanthus</u> ,													
<u>Golden Weaver</u>													7
<u>Ploceus manyar</u> ,													
<u>Manyar Weaver</u>													
<u>Ploceus philippinus</u> ,													533
<u>Baya Weaver</u>							95				288	385	5341
									2				

MIGRATORY ANIMAL PATHOLOGICAL SURVEY

ANNUAL PROGRESS REPORT

1969

PART II

MIGRATION IN ASIA AS SUGGESTED BY REPORTED

RING RECOVERIES

HISTORICAL BACKGROUND

At the inception of the MAPS research program paramount before it was the question "What are the migration routes or flyways of Asian birds". No one really knew what the migration routes were. Historically a number of ornithologists have proposed routes based upon observations of migrants in flight, arrival and departure dates, and lighthouse kills. But a body of information pinpointing population origin or destinations was not available.

(1)

In 1931 Tugarinow brought together the information that he had concerning the movements of birds of northern Asia. He describes eight routes which he shows unnumbered in Fig. 2. In this he ignores the routes from Asia into Japan and south to the Philippines. He may have been unaware of the ringing results in Japan. The routes that he suggested were based mainly on known flights of species over long distances.

(2)

Oliver L. Austin after reviewing Japanese ornithological literature with the help of Dr. Nagahisa Kuroda described the migration routes of the commercially valuable song-birds (fringillids and turdids) into Japan. His figure (Fig. 3) is basically correct and he describes these routes, "The first is the Thrush-Brambling flight, centering in the Fossa Magna across central Honshu. The second is the Bunting flight, terminating in the highlands of northern and eastern Honshu. The birds of the Thrush-Brambling flight are raised in the vast inland steppes between Lake Baikal, the Taimyr Peninsula, and the Lena River. In autumn they move southward and gather on the north shore of the Japan Sea, along the Russian Altai north of Vladivostok. From there they cross

(1) Tugarinow, Von A. 1931. Die Wanderungen der Nordasiatischen Vogel. *Der Vogelzug*. 2:55-66. (German)

(2) Austin, Oliver L. 1947. Mist netting for birds in Japan. General Headquarters Supreme Commander for the Allied Powers. Natural Resources Section. Report No. 88. Tokyo

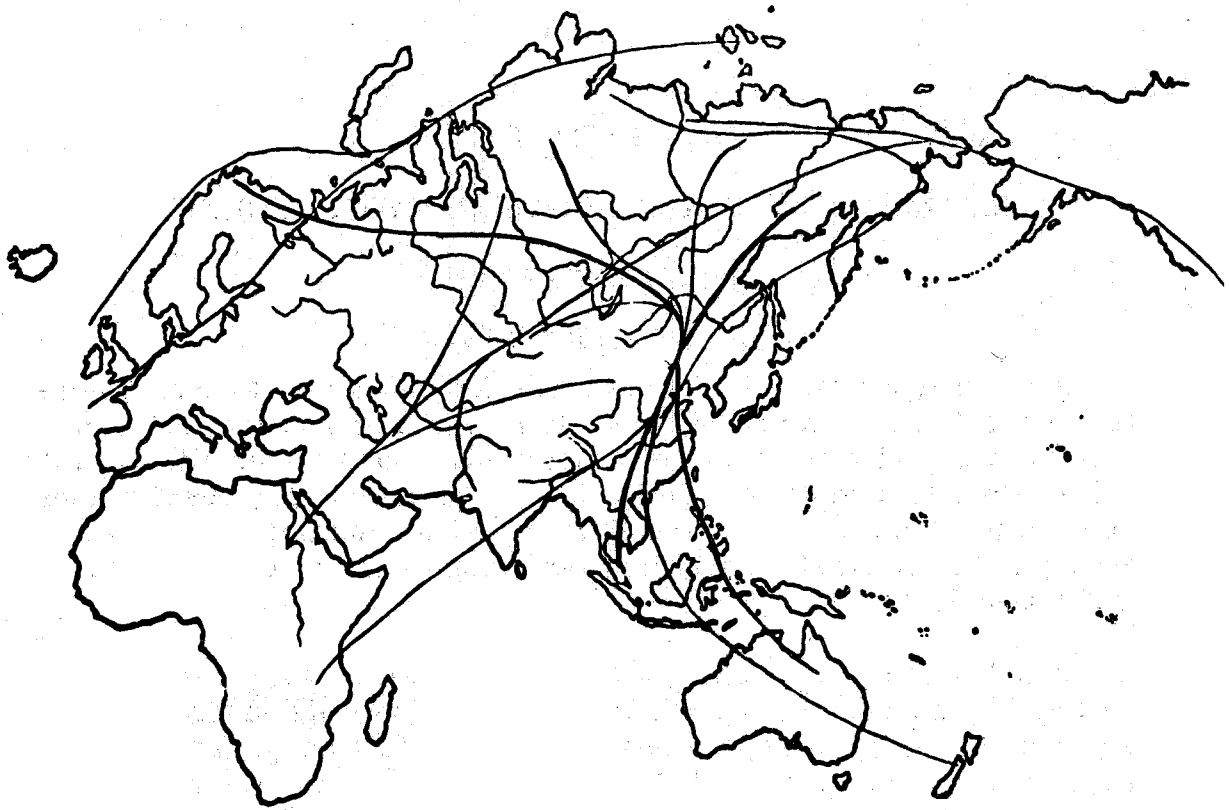


Fig. 2. Asian bird migration routes as illustrated by Tugarinow, 1931.

the Japan Sea and land on the north coast of Honshu between southwestern Niigata and Fukui prefectures. " This flight still comes to Japan each fall for thousands of these birds have been observed arriving on the slopes of the westward facing foothills early in October mornings. "They cross Honshu via the Fossa Magna and disperse for the winter along the south coast of Honshu, Shikoku, Kyushu and as far south as the Ryu Kyus. One branch of this flight spreads eastward, visiting Tochigi prefecture in large numbers. "

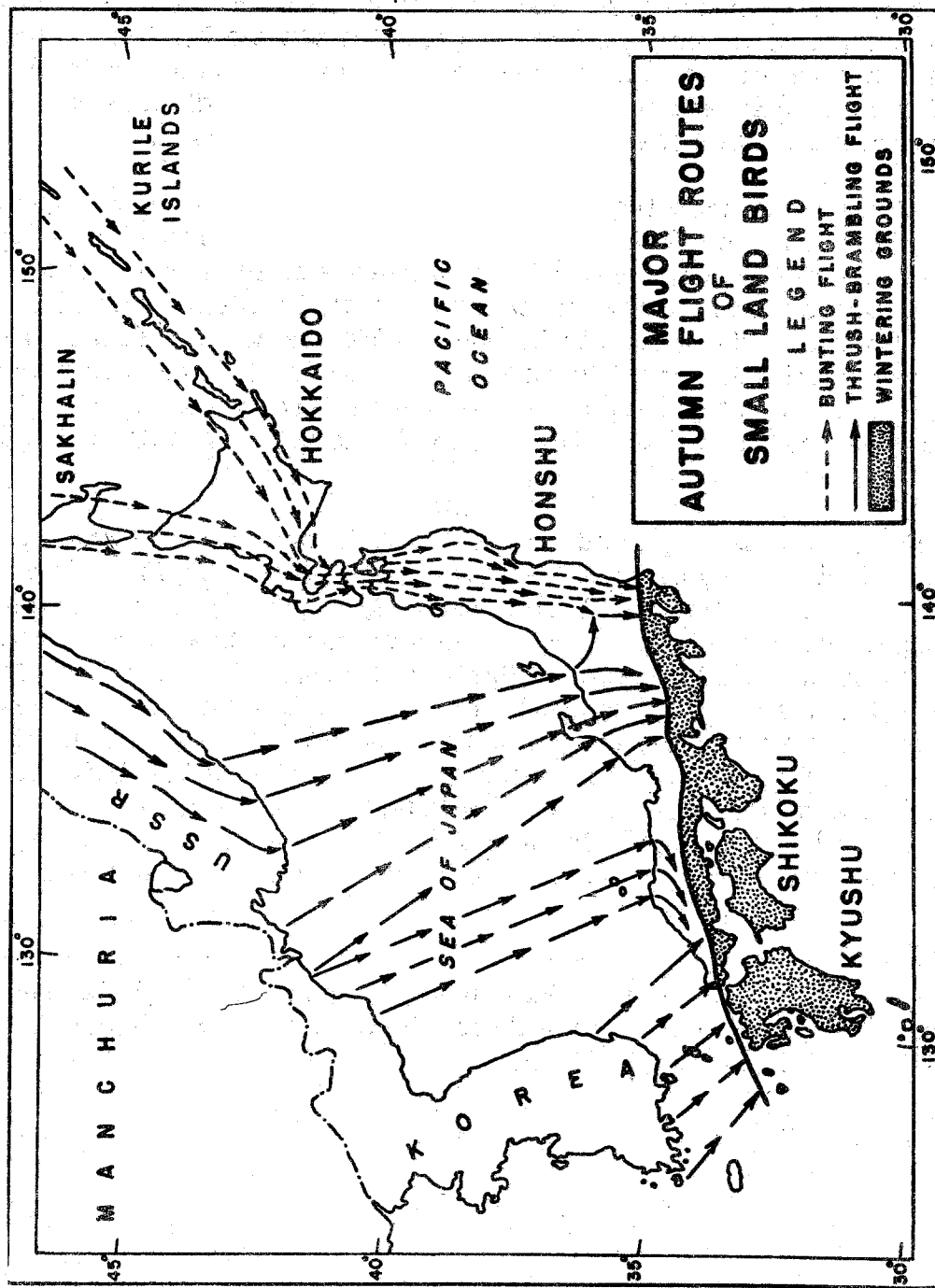


Fig. 3. The routes of fall migrant passerines into Japan as illustrated by Austin, 1947.

"The Bunting flight originates in extreme north-eastern Siberia, from the Sea of Okhotsk and the Kolyma River eastward to Bering Straits. One part of this flight reaches Hokkaido from Sakhalin. The other follows down Kamchatka and joins the first in Hokkaido via the Kurils. It then crosses Tsugaru Straits, and comes down the mountains and both shore-lines of Northern Honshu to Niigata and Chiba where it disperses to winter in small groups in the coastal areas from Sendai to Kyushu."

Although we know that these flight routes exist we still have very little information to confirm them. 169,000 fringillids have been ringed, the great bulk of them in Korea with an adequate sample from Japan and Thailand, but there are no records to show that the flight crosses from Korea to Kyushu and on south to Taiwan. What we do have suggests that Korean passage birds winter in Taiwan and mainland China with some spill over into South East Asia. No recoveries are available, except one Hawfinch and one Black-faced Bunting to tell us where in Siberia these flights originate.

(3)

During the same period Austin and Kuroda reviewed the duck migration to Japan and summarized the results of the ringing that had been done during the period 1924-42 when 19,000 ducks of 14 species were ringed with an 18% recovery. The majority of these recoveries were from birds killed in Japan. Significant recoveries outside of Japan have been included in our summary here. From his data Austin drew a map of duck migratory routes into Japan (Fig. 4) and from it it is evident that he lacked any information concerning the origins of the duck populations in Eastern Siberia. His arrival dates are shown in Fig. 5. The results of subsequent ringing in Japan, Siberia, and India have added greatly to our knowledge of duck movements in Asia and are discussed below.

-
- (3) Austin, Oliver L. 1949. Waterfowl of Japan. General Headquarters Supreme Commander for the Allied Powers. Natural Resources Section. Report No. 118. Tokyo

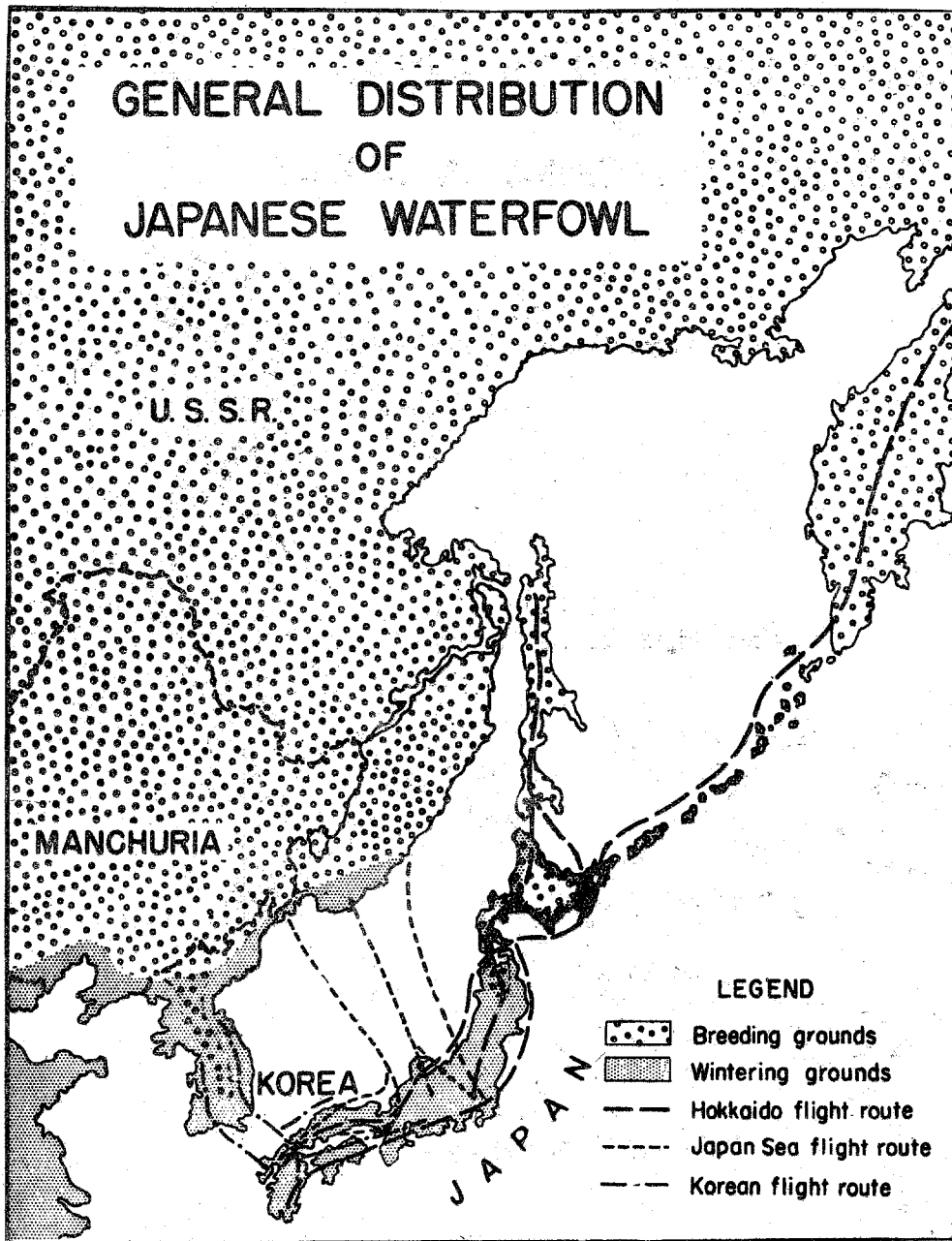


Fig. 4. The routes taken by waterfowl into Japan during fall migration as illustrated by Austin, 1949.

**MAIN CONCENTRATION AREAS
OF
WATERFOWL WINTERING IN JAPAN**

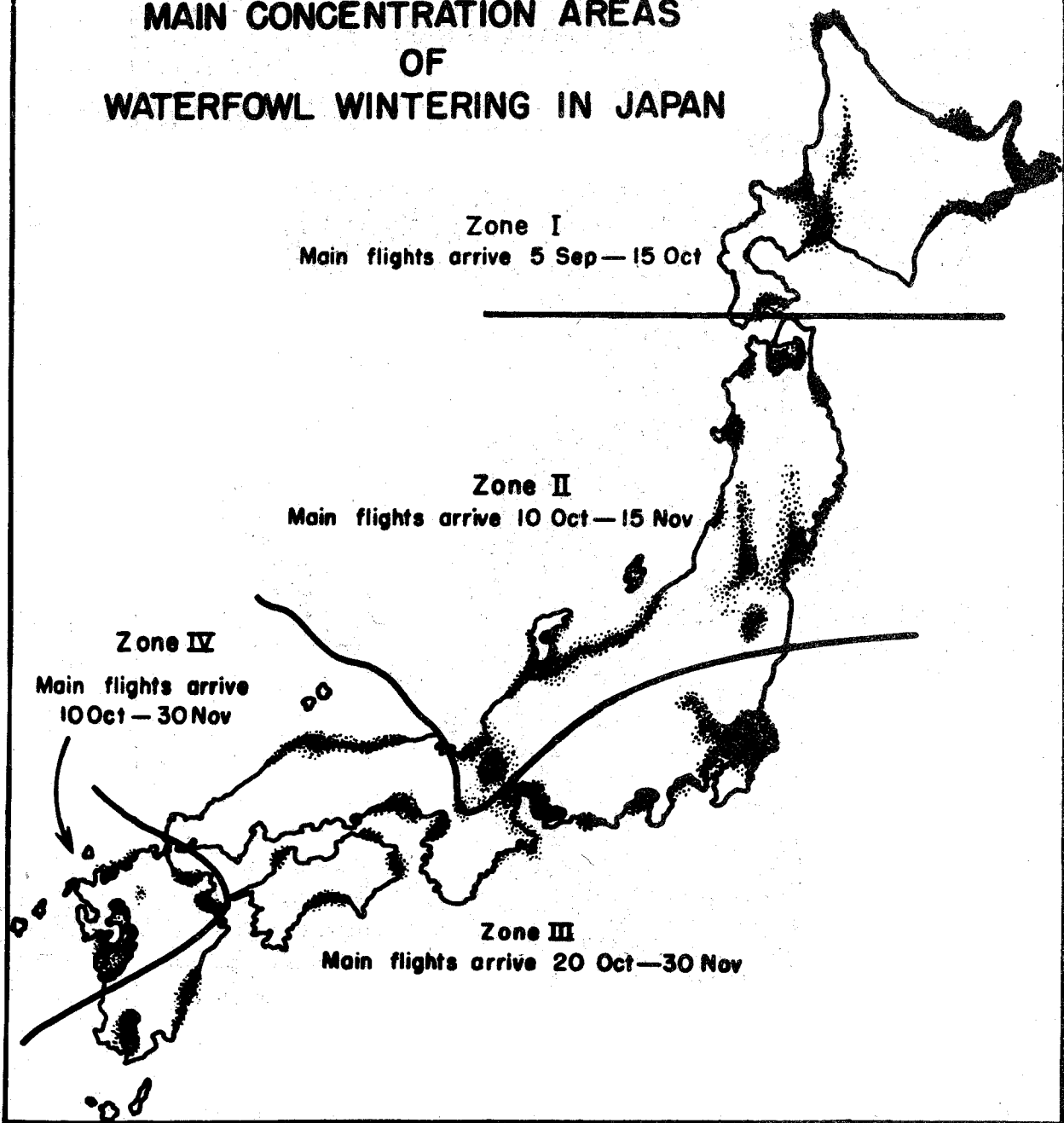


Fig. 5. Arrival dates of waterfowl entering Japan, from Austin 1949

(4)

Hachisuka and Udagawa continued the discussion of bird migration in Eastern Asia and extended the routes on into China, Formosa and the Philippines. Their map of migration routes is reproduced in Fig. 6. They recognized nine paths across eastern China and along the continental shelf and list some birds as using or being represented in these flights. What they show in the map as 10 and 11 are the southern and northern boundaries of certain groups. Hachisuka describes their routes as follows:

Route 1. From Japan through the Ryu Kyus to Formosa and the Philippines.

Most Japanese migrants, including swifts and shorebirds. Most travel the length of Taiwan along the lowlands of the west side.

Route 2. From Japan, through the Ryu Kyus, avoiding Taiwan, passing through Orchid Island on to the Philippines.

Red-cheeked Myna
Ruddy Kingfisher
Brown Hawk Owl

Route 3. From Kyushu across the East China Sea to China.

Crowned Willow Warbler	Siberian Blue-tail
Broad-billed Roller	Short-eared Owl
Schrenck's Little Stint	Grey-headed Lapwing

Route 4. Through Korea and North China to Southeast China.

Many species.

Route 5. Coastal migration along the shores of the eastern bulge of China.

Most water birds, shorebirds, waders.

Route 6. The short hop across the Straits from mainland China to Formosa and on to the Philippines.

Brown Shrike	Bush Warbler
Grey-backed Thrush	Many others.

(4) Hachisuka, Masuaji and Udagawa, Tatsuo. 1950. Contributions to the ornithology of Formosa, Part 1. Quart. Jr. Taiwan Museum. 3:187-280

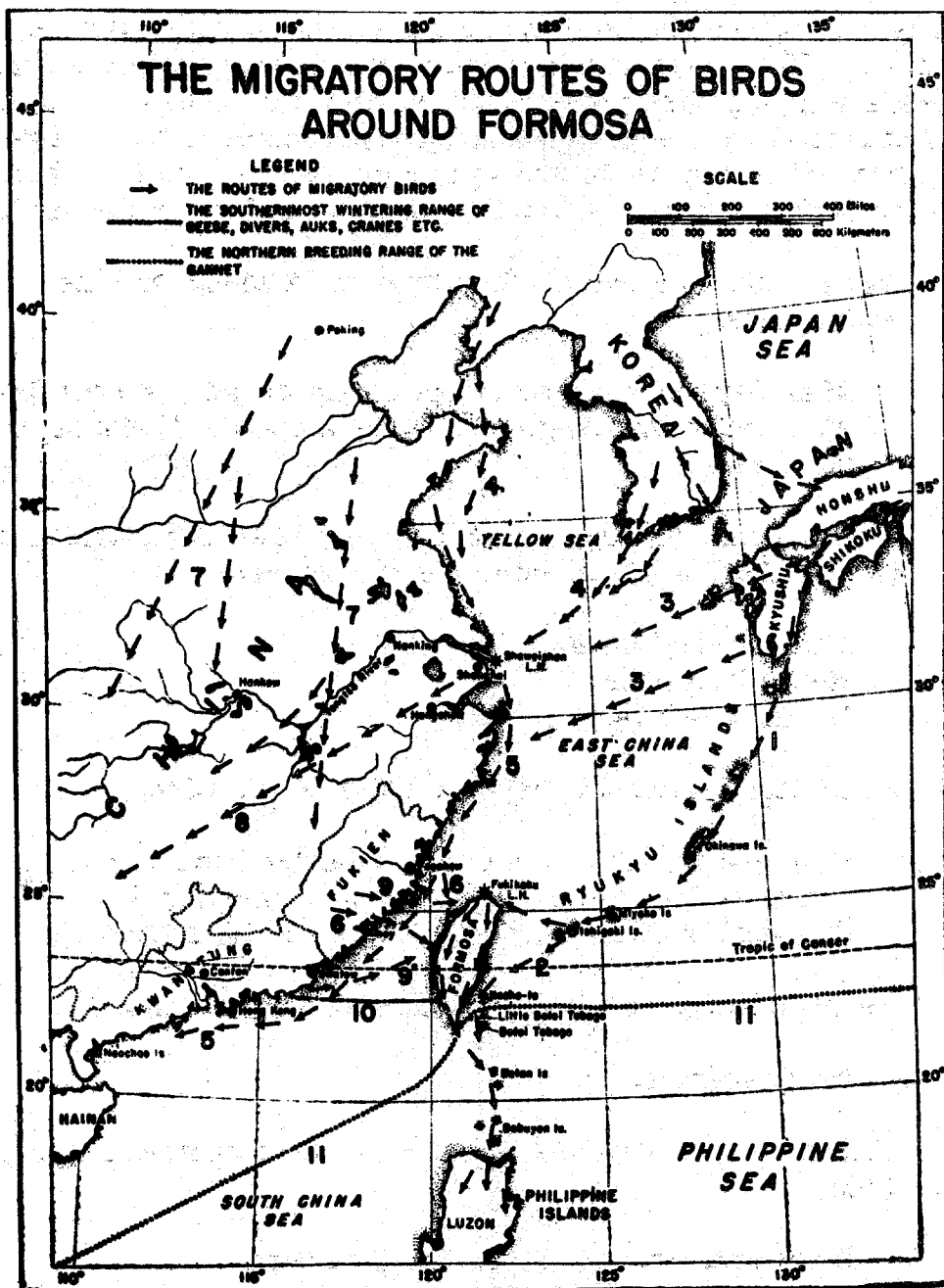


Fig. 6. Fall migration routes of birds in Eastern Asia as figured by Hachisuka and Udagawa, 1950

Route 7. South through East-central China and south-west into Indochina.

House Swallow
Chestnut Bunting
Brown Shrike

Route 8. Birds from Japan moving across eastern China join Route 7 into Indochina.

A Japanese banded Black-crowned Night Heron is believed to have taken this route.

Route 9. From South China northward across the straits to Formosa.

Tropical species that get this far north
Blue-winged Pitta
Water cock

The significant thing that he shows, but which he fails to stress is the crisscrossing of routes within this area. His descriptions are vague and the species involved even vaguer, but he and Udagawa well understood the mass of avian movement that progresses through eastern Asia from Japan to Indochina and the Philippines.

Without cooperation from China further clarification of the routes within eastern China has not been possible, but there are now numerous records of ringed birds taken in the coastal and inter island routes.

On the basis of distribution and the observation of migrants Hachisuka and Udagawa further clarified the movements of migrants between Japan and Formosa in their discussion of 1953.⁽⁵⁾ Their chart of these flights is given as Fig. 7

In this figure Hachisuka indicates six routes of movement out of the Japanese Archipelago.

Route 1. From Kyushu across the East China Sea to the delta of the Yangtse River.

Japanese summer residents that use this route and do not go down the Ryu Kyus are listed as follows:

(5) Hachisuka, Masuaji and Udagawa, Tatsuo. 1953. Contribution to the ornithology of the Ryu Kyus Islands. Quart. Jr. Taiwan Museum. 4:141-279

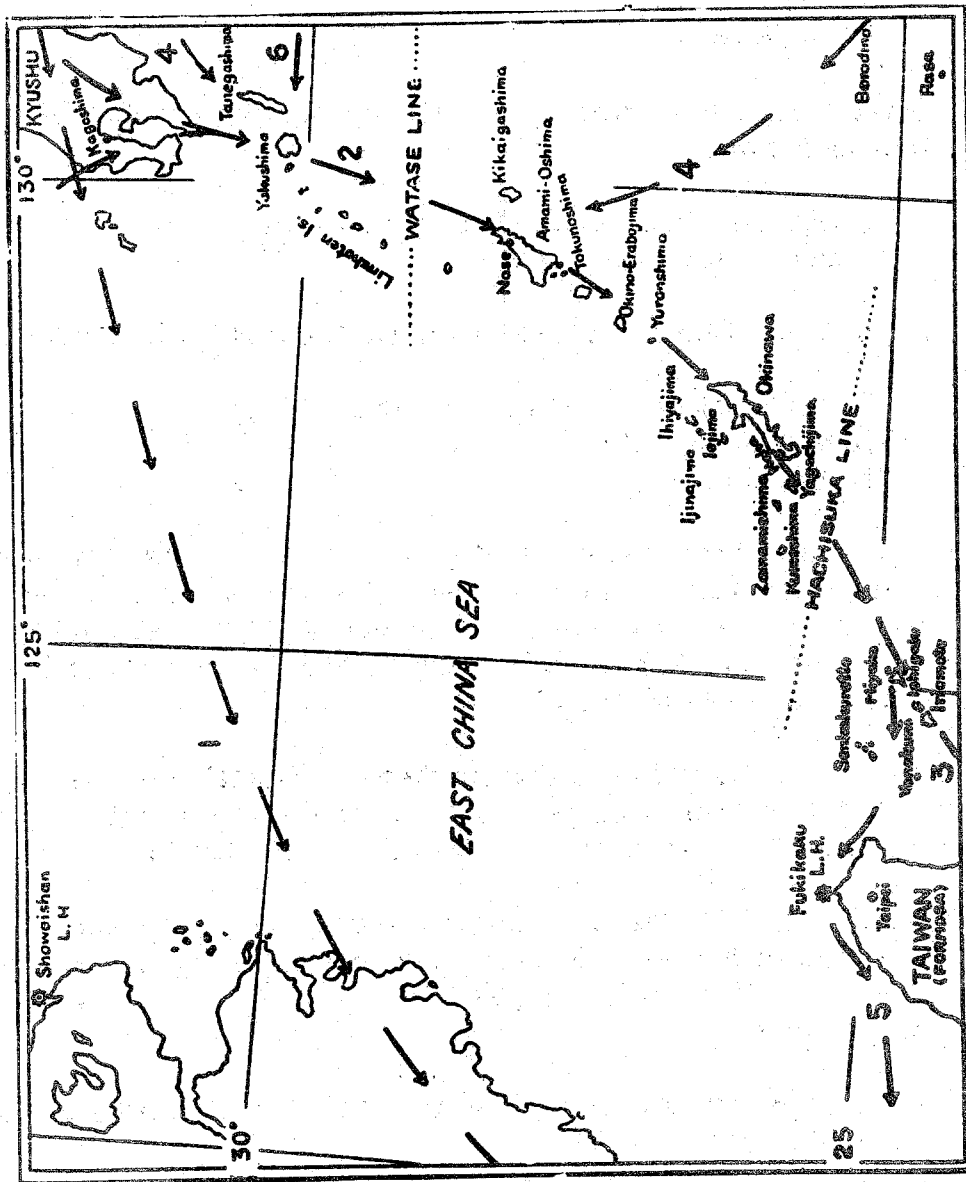


Fig. 7. The fall migratory routes around the Ryukyu islands as illustrated by Hachisuka and Udagawa, 1953.

Ashy Minivet	Paradise Flycatcher
Brown Flycatcher	Japanese Blue Flycatcher
Crowned Willow Warbler	Great Reed Warbler
Von Schrenck's Reed Warbler	Siberian Ground Thrush
Grey Thrush	Stonechat
Siberian Blue Robin	Red-rumped Swallow
House Martin	Blue-winged Pitta
Broad-billed Roller	Common Cuckoo
Blyth's Cuckoo	Little Cuckoo
Von Schrenck's Bittern	

Route 2. From Japan along the Ryu Kyus to Taiwan.

The following make use of this route, but only those starred use it almost exclusively, the remainder use Route 1 as well.

Grey Starling	*Violet-backed Starling
Pied Wagtail	Narcissus Flycatcher
Arctic Willow Warbler	*Brown Thrush
Dusky Thrush	House Swallow
*Gray-faced Buzzard	*Red-necked Phalarope
Green Sandpiper	Wood Sandpiper
Wandering Tattler	Common Whimbrel
Rufous-necked Stint	Woodcock
Swinhoe's Snipe	Grey Plover
Pacific Golden Plover	Mongolian Plover

Route 3. This bypasses Formosa and goes south through Orchid Island to the Philippines.

Violet-backed Starling	Ruddy Kingfisher
Brown Hawk Owl	Grey-faced Buzzard

Route 4. From Amami-Oshima some birds turn south to the Boridono Islands and on to the Philippines.

Large-billed Crow (?)	Rook (?)
Ruby-throat	House Wren
Sparrow Hawk	Intermediate Egret
Von Schrenck's Bittern	Australian Curlew
Temminck's Stint	Latham's Snipe

(We believe that the Cattle Egret may also take this route.)

Route 5. Hachisuka feels that some species move across the Straits between China and Taiwan, but do not go further north into the Ryu Kyus.

Jackdaw	Tristram's Bunting
Richard's Pipit	Petrona Pipit
Pied Wagtail (sub-species <u>leucopsis</u>)	
Brown Shrike (sub-species <u>lucionensis</u>)	
Purple Heron	Pond Heron

Route 6. There may exist an overseas route between the Seven Islands of Izu (the Izu Chain) and the Ryu Kyus. Birds that appear to use this route are.

Narcissus Flycatcher (Muscicapa narcissina jokuschima)
 Greater Crowned Willow Warbler (Phylloscopus occipitalis ijimae)
 Brown Thrush (Turdus chrysolais celaenops)
 Japanese Robin (Erithacus akahige tanensis)

Because of political isolation, Chinese biologists have been unable⁽⁶⁾ to assist in this study of bird migration. Cheng in his monograph, 1963, reviews bird migration and refers to his paper of 1955⁽⁷⁾ (which the author has not seen). He admits that migration through China is not well known. In spite of official interest in birds, as evidenced by his monograph on their economic values, bird ringing to learn more about their movements has obviously not been authorized. It has been permitted in North Korea and MAPS personnel have trapped some North Korean birds, but no China marked birds have been reported.

The routes that Cheng describes are shown in Fig. 8. He does not list the birds that use these flyways and he lumps all of the mainland routes into one system. He considers the route from the Philippines through Taiwan into Korea and Japan as separate one. Because of the arid and inhospitable areas of western China, which he divides into two faunistic regions, Mongolia-Sinkiang and Tsinghai-Tibet, the migrants leaving South East Asia are forced to swing eastward over more hospitable environments and then back westward as they work north of the 38th. parallel.

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- (6) Cheng, Tso-hsin. 1963. China's economic fauna: birds. Science Publishing Society, Peiping. 694 pages. (Chinese)
- (7) Cheng, Tso-hsin and Li, Kuei-yuan. 1955. The migration of seasonal birds in China. Sheng-wu-hsueh T'ung-pao (Bulletin of Biology) 11:23-26. (Chinese)

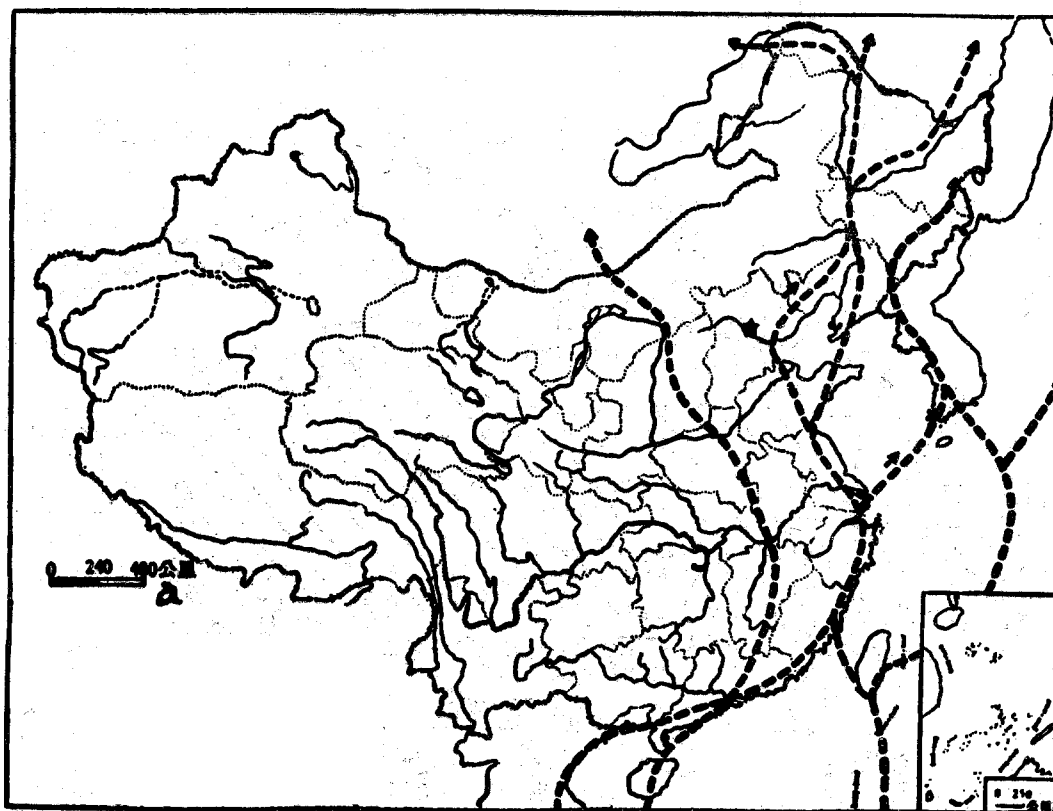


Fig. 8. Migration routes in Eastern China as figured by Cheng, 1963

(8) Dorst using the data presented by Moreau (9) discusses the criss-crossing of migration paths in Eurasia. Moreau found that 37 species which bred in western Siberia were found wintering in India, 33 went to Africa and that 10 species overwintered in both India and Africa. There were no data to determine if there were different populations of the same species using the several migration paths. Figs. 9 and 10 illustrate this material.

(8) Dorst, Jean. 1962. *The migration of birds*. Wm Heinemann Ltd. London. 470 pp. (pp. 93-96)

(9) Moreau, Reginald E. 1952. The place of Africa in the palaeartic migration system. *Jr. Animal Ecology*. 21:250-271

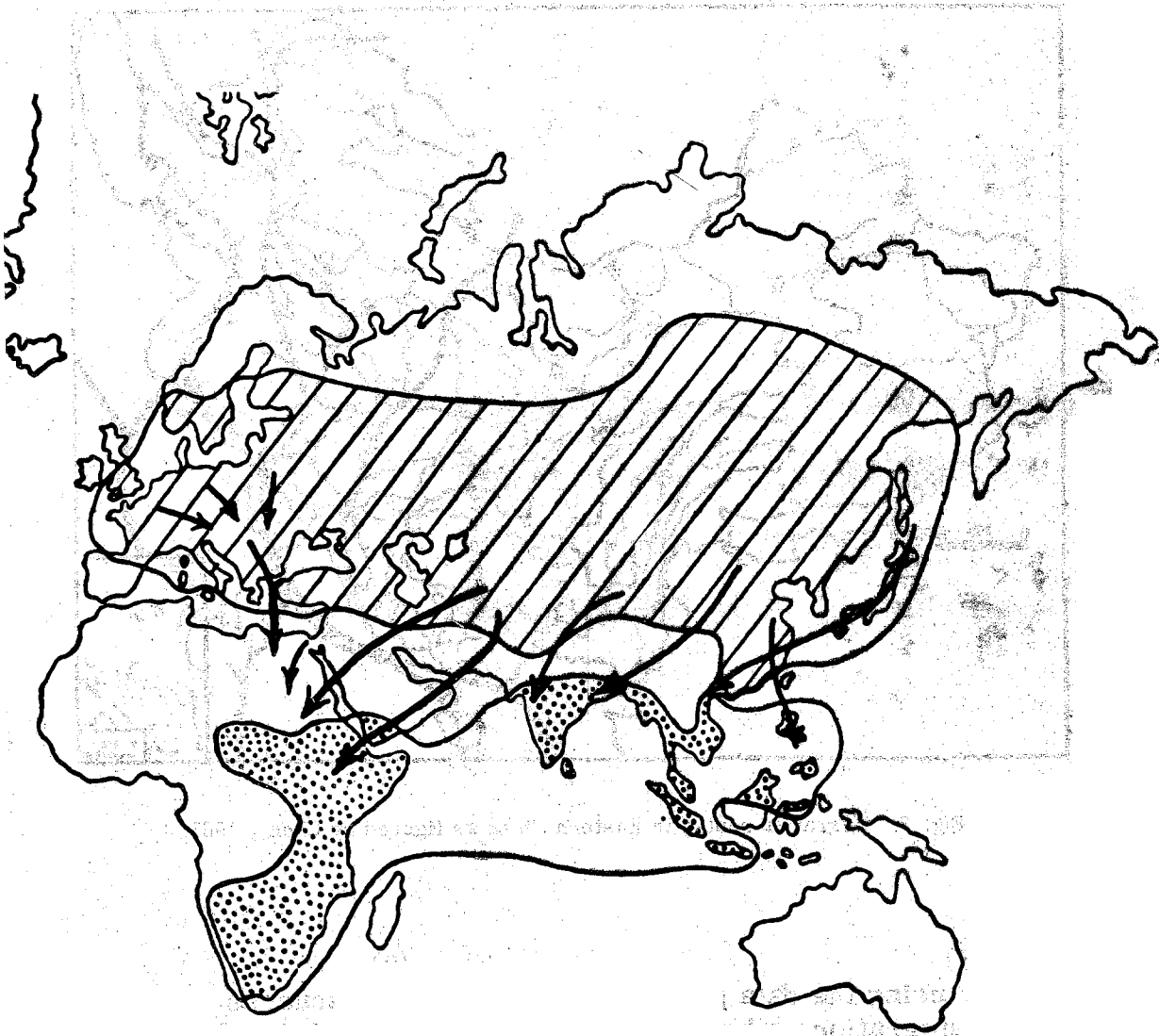


Fig. 9. Migration of Lanius cristatus-collurio, now considered separate species, as illustrated by Dorst, 1962.

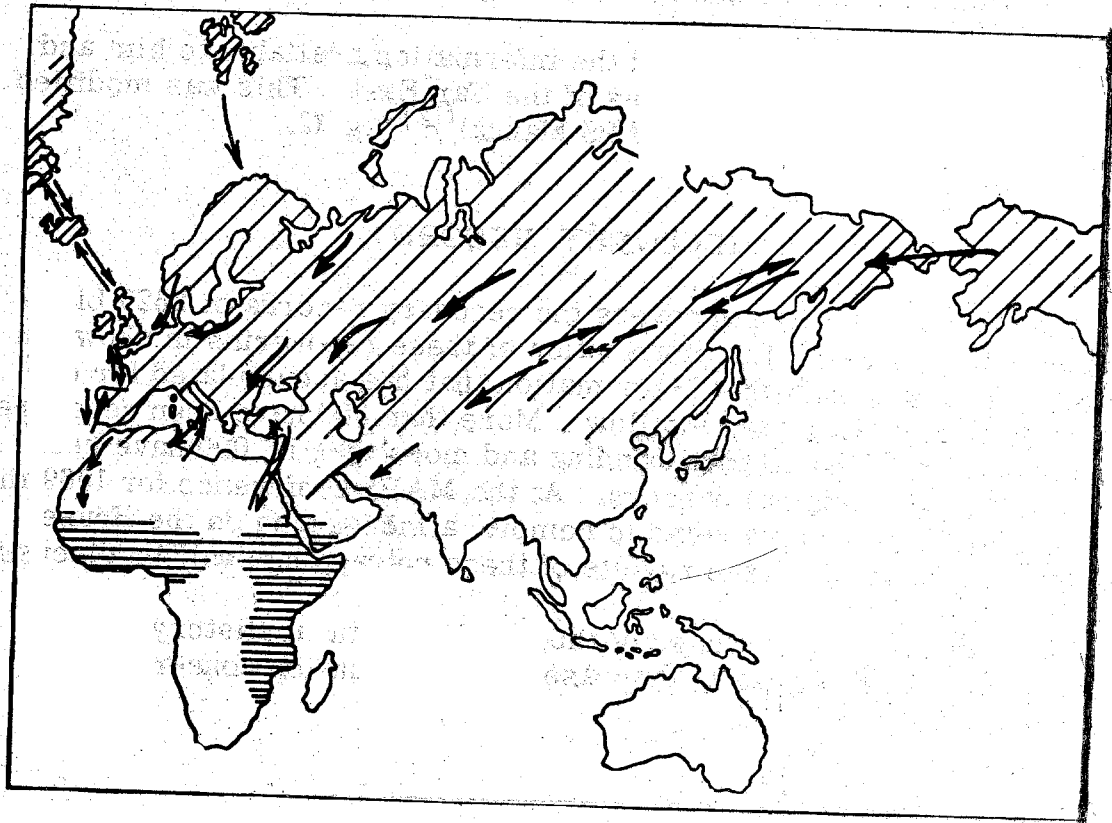


Fig. 10. The apparent migration routes of the Wheatear as illustrated by Dorst, 1962.

(10)
In 1956 Kuroda published an excellent volume on bird study for school children. He revised it in 1962 and included the chart of Asian and West Pacific migration routes shown in Fig. 11.

(11)
In 1958 McClure reviewed the information available to him and attempted to draw migration routes of the Far East. This was modified and included as a figure in the MAPS Manual⁽¹²⁾ Fig. 12.

RECOVERY RECORDS

The present discussion covers the recovery records of 2623 birds of nearly 200 species. The distribution of these recoveries is shown in Table 6. The largest body of information that has accumulated for one species is that of the House Swallow. More than 300 have been recovered at a distance from the point of banding and more than 12,000 have been recaptured by the original banders. At the MAPS conference for 1969 the Responsible-Investigators voted to compile a monograph on the House Swallow in Asia in which the results of these retrappings will be discussed.

The addition of the studies of the Bombay Natural History Society to the MAPS data has greatly increased the information concerning the movements of ducks.

(10) Kuroda, Nagahisa. 1962. Bird study. Shogakukan. 157 pp.
(in Japanese)

(11) McClure, H. Elliott. 1958. Bird migration in the Far East and its zoogeographical implications. Proc. Centenary and Bicentenary Congress of Biology, Singapore. pp. 144-153

(12) McClure, H. Elliott. 1966. An Asian bird-banders manual. Migratory Animal Pathological Survey. 157 pp.

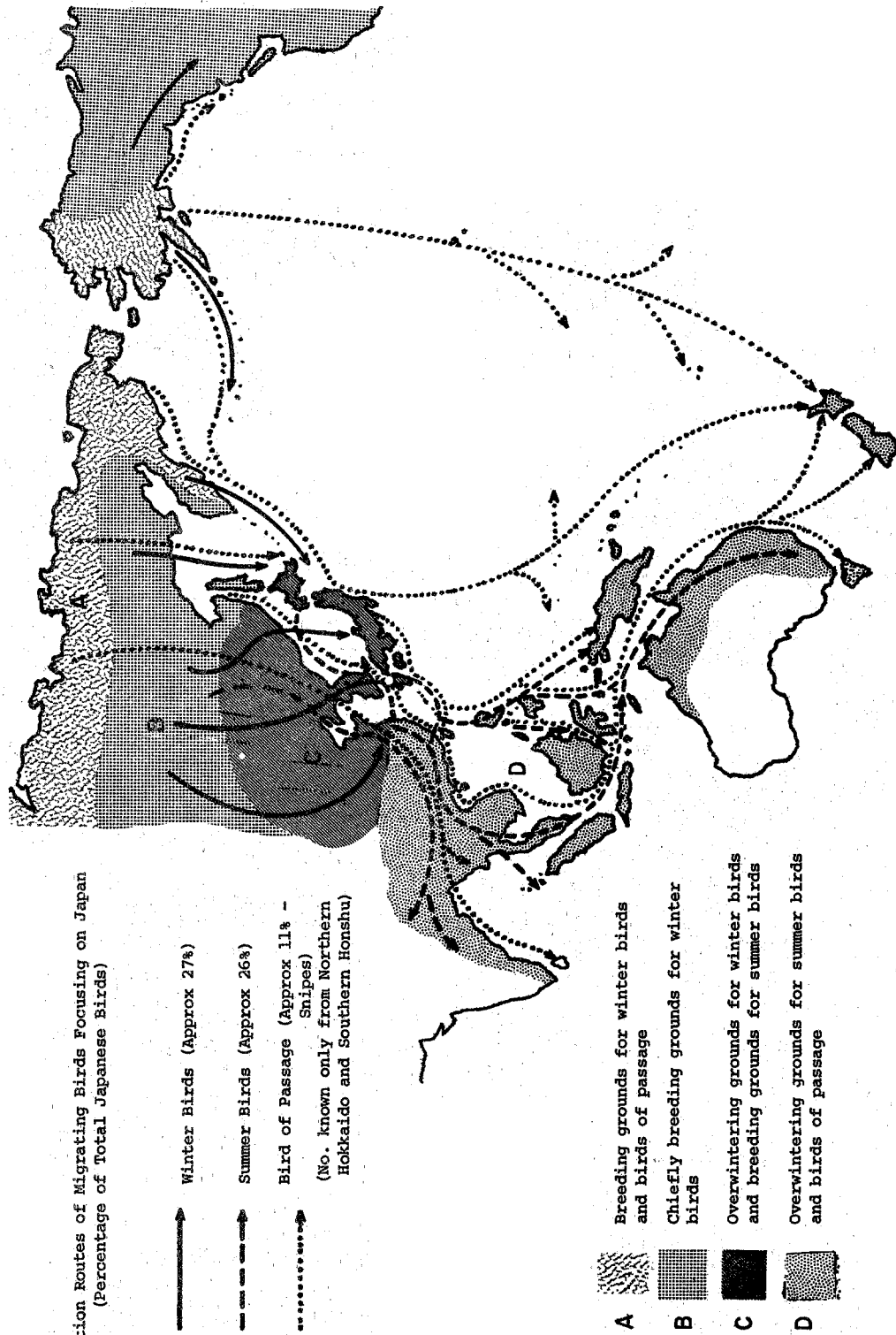


Fig. 11. Kuroda's, 1962, illustration of migration in Eastern Asia.

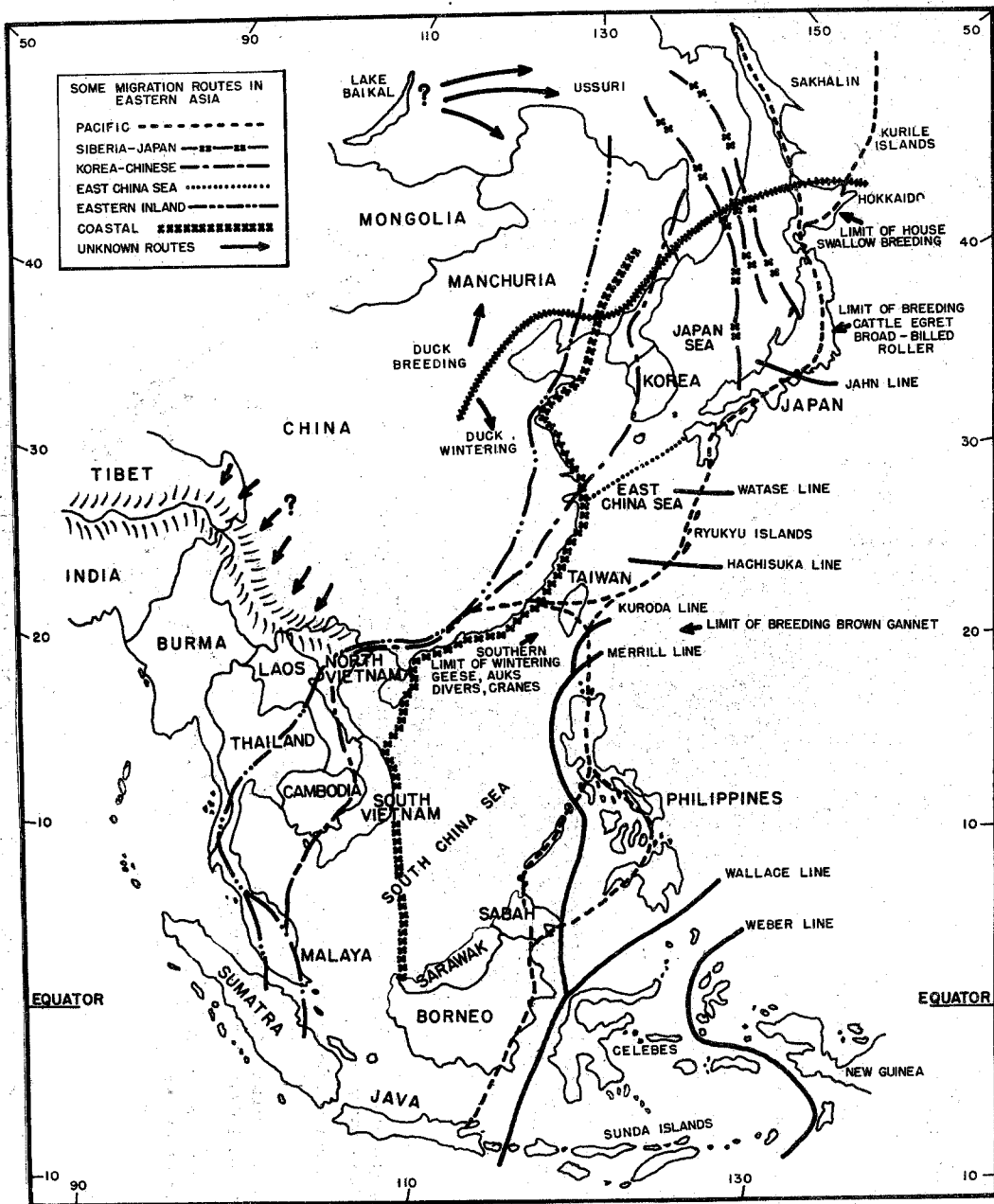


Fig. 12. A compilation of Eastern Asian migration routes as illustrated by McClure, 1966.

TABLE 6. THE DISTRIBUTION OF RING RECOVERIES FROM AREAS IN WHICH THEY WERE BANDED

Country of Recovery	Country of Origin											Total		
	Korea	Japan	Okinawa	Taiwan	Philippines	Thailand	Malaya	Singapore	Sarawak	Indonesia	India		Australia	Pribilof Island
Korea	164	4		2	5	11	4					7		197
Japan	3	409		22	3		2					7		456
Okinawa			1										10	1
Taiwan	4	7	5	48	4	2	1		1					69
Philippines	12	65	75	157	319		8						1	632
Thailand	8			1		238								255
Malaya	3	1		2		8	194							211
Sarawak	3							3						34
Indonesia	3							31	18					18
India										76				76
Burma	1													1
Laos						2	1							3
Cambodia						1								1
South Viet-nam	1													1
Siberia	4				1									2
Australia		97		8	3	42	7			309			1	471
Pacific Islands		1												1
Pribilof Islands		3											9	14
East Pakistan		34		2										34
North Korea						5	1							6
China						68	11							79
West Pakistan							1			16				1
Central Asia										45				16
Total	203	621	81	242	332	377	230	35	18	446	14		21	2,623

The data concerning the ardeid movements have also become sufficient to be analysed. These three groups are discussed here.

As mentioned in an earlier report (1966) the factors affecting the rate of recovery and the reporting of these recoveries in each country are diverse; number of birds ringed, literacy of the population, traditions or taboos, the type of government, the amount of advertisement about banding, etc. It is probable that all of these factors act equally on all recovered birds in any one country. Therefore the one factor which is variable and which probably plays an important part relative to recoveries and reporting is the actual number of ringed individuals in the bird population. It is plausible to assume that with an equal number of migrants from two regions the number of reported recoveries would be directly proportional to the number banded in these regions. Based upon this assumption the number of recoveries have been weighted by the factor of the number originally ringed and percentages of the migrant populations determined from these.

HOUSE SWALLOW

More than 260 thousand House Swallows have been ringed. When arranged by recoveries from five degree squares of latitude and longitude there have been 200 recoveries from squares at a distance from and outside of the five degree square in which they were ringed.

There are two groups of ringed swallows, those ringed within their breeding range (mainly Japan and Korea during this study) and those ringed as passage migrants or winter residents (Taiwan, Malaya, Thailand)

Two pictures of swallow migration in Eastern Asia are beginning to appear suggesting that there are two main streams or flyways.

One hundred thousand swallows were banded in Thailand and 77,000 in Malaya. Although a vast population of swallows overwinters in Thailand there are also great numbers that move further south. Seven Thai marked birds were recovered in Malaya and seven Malayan marked birds were recovered in Thailand. In each instance these recoveries must be ignored since they were passage migrants. Sixteen foreign marked birds were found within the flocks roosting at Bangkok and Nakornsawan in Thailand; seven from Malaya, one from Taiwan, and eight from Korea. Slightly more birds were ringed in Taiwan than Korea and weighting these figures indicates that there were 10 Taiwan birds to 90 Korean birds. Of the four birds recovered in Taiwan, by a similar correction method, it was indicated that half of the passage migrants were from Japan and half from Korea. This would make a further correction of 5 Japan originated birds to 95 Korea ones in the Thai populations.

There were 12 recoveries in Malaya, seven from Thailand (which must be ignored), one from Taiwan, three from Korea, and one from Japan. Altering these figures to correspond with members ringed, the population appeared to be made up of 13% Taiwan birds, 44% Korean, and 43% Japanese. Again allowing for an equal division of Taiwanese birds between Korea and Japanese, it is suggested that the Malayan population is of half Japanese and half Korean origin.

Nineteen recoveries came from the Philippines where the bird does not overwinter in such immense flocks as in Thailand or Malaya. Only about 2,300 swallows were ringed in Palawan and less than a hundred in Luzon or in Mindanao. These Philippine recoveries when corrected for the number ringed indicated nearly equal numbers from Taiwan, Korea and Japan. Altering further from Taiwanese data places the birds moving into the Philippines as about equally divided between Korea and Japan.

The two recoveries from Borneo have been of Korean marked birds.

Thirty-five thousand swallows were ringed in Taiwan and these were passage migrants. As given above, only four foreign marked birds were recovered.

Nearly 32,000 swallows were banded in Korea. Much of both North and South Korea lies within the five degree square $35^{\circ} \times 40^{\circ} \text{N}$ and $125^{\circ} \times 130^{\circ} \text{E}$. Within this square there were 105 recoveries, 15 from Malaya, 86 from Thailand, and 4 from Taiwan. After altering these figures the population appears to be made up of 16% birds that overwintered in Malaya and 74% that overwintered in Thailand. There is a further error here since seven Malaya marked birds were caught in Thailand. These among several thousand birds that repeated locally indicating winter residency (to be discussed in a later report)

Swallow concentrations are less in evidence in Japan where much of the ringing was of nestling birds. Eleven thousand were ringed and only one recovery was reported, this bird from Malaya.

To the north of Korea and Manchuria the swallow population spreads westward. From the southern borders of Siberia between 50° and 55°N the Malayan and Thai birds ranged from 105° to 140°E . Forty-two recoveries were reported from the vast area; 5 from Malaya, 35 from Thailand, and one each from Taiwan and Korea. The corrected figures indicate that the population was made up of 18% from Malaya, 74% from Thailand, and 6% each from Korea and Taiwan.

For the purpose of this discussion we have ignored the fact that vast numbers of swallows breed throughout China. Cheng (1969) reports that they breed throughout most of China, but he does not give any indication of population densities. What proportion of the Malayan and Thai flocks is made up of birds of Chinese origin can only be conjectured. However, this does not alter the fact that we can now draw two great flyways used by these eastern Asian Swallows. Fig. 13 presents the flyway that is apparently used by most of the birds breeding in Korea and Siberia that overwinter in Thailand and Malaya. There may be a spillover from this route into Japan, but the one recovery there could have used the island route. Fig. 14 presents the two flyways apparently used by birds of Korean and Japanese origin. There appears to be a great pincher's movement here with the bulk of the Japanese birds moving south along the islands and into Borneo and Malaya. Korean birds apparently use both the island route and that of Eastern China. The lack of recoveries in the Philippines of birds ringed in Malaya or Thailand suggests that the "pinchers" is a circuit and that swallows coming south through the Philippines may go north through South-East Asia and China. One bird ringed in Palawan and recovered in Viet-nam lends credence to this.

THE ARDEIDS

Nineteen species of ardeids have been banded with a total of more than 51,000 individuals. The bulk of these have been nestlings of Egretta and Nycticorax. Colonies of mixed species have been under study in Eastern Siberia, Korea, Japan, Taiwan, Malaya and Java. Russian biologists ringed extensively at Lake Khanka in Eastern Siberia. Several small colonies were found in South Korea and 1,900 birds marked. The large colonies in the vicinity of Tokyo provided the source of 16,000 birds, and several large colonies were used in Taiwan with a total of 19,000 ringed. Recoveries have been reported from all of these sources. A large colony of Nycticorax in Malaya (7,000 ringed) and a mixed colony in Java (6,000 banded) have yielded only local recoveries. All of the 1,300 birds ringed in the Philippines have been individual birds caught by nets. Three distant recoveries were reported from these

These populations appear to be made up of several genetic pools or strains of migrants and non-migrants. Most ardeid species are to some extent migratory, from the almost sedentary Chinese Pond Heron to the totally migrant Cattle Egrets. Migratory habits are unrelated to the taxonomic groups in which the species is placed. Of the 502 recoveries of ardeids 212 were at a distance from their source great enough to indicate migration other than dispersal from their nesting areas. As yet no recoveries from the colonies in Malaya and Java suggest that any part of the population is migratory. All have remained within five degrees of the colonies.

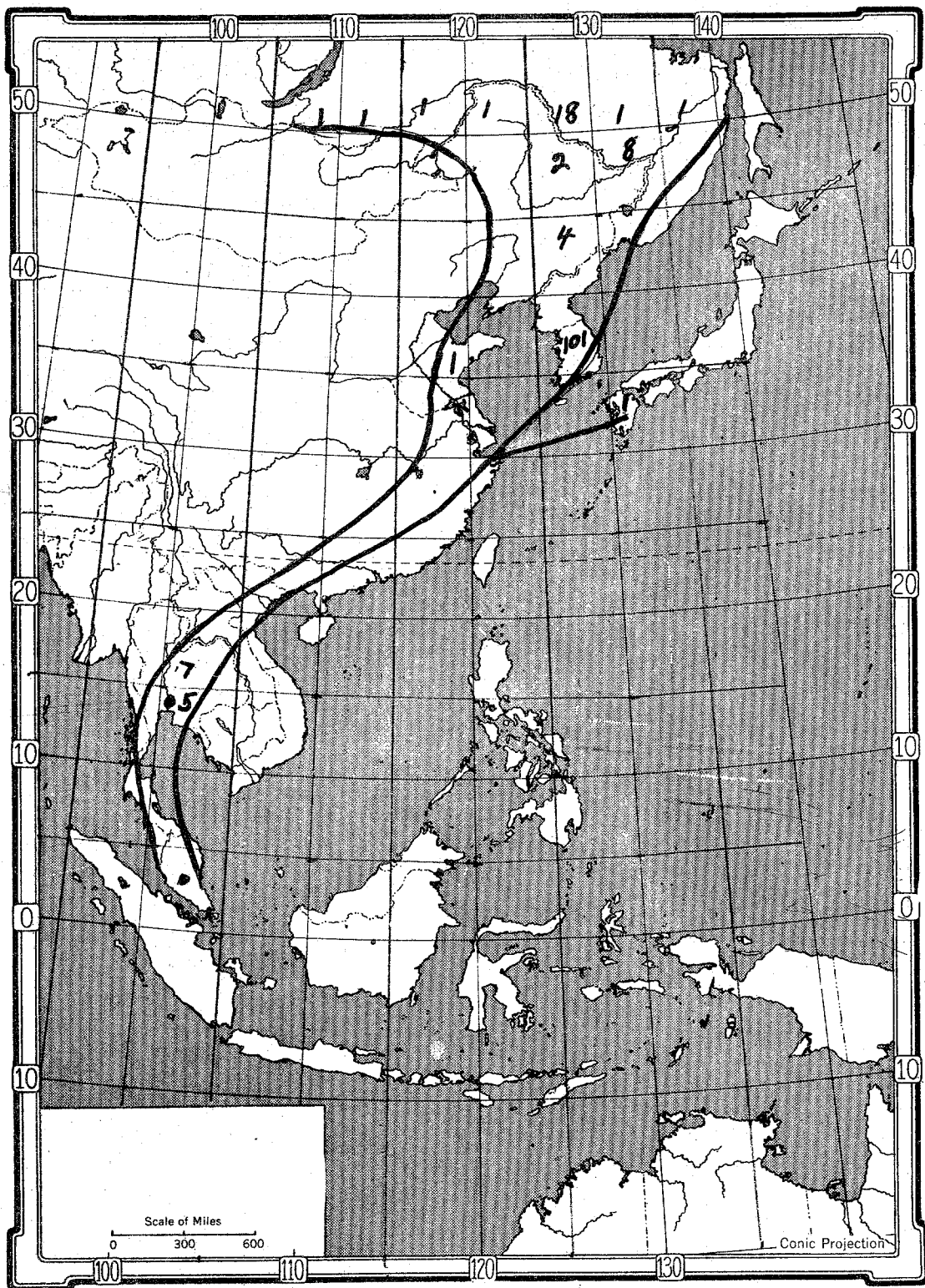


Fig. 13. Migration route of the House Swallows banded in Thailand and Malaya. Figures indicate the number of recoveries from each five degree square.

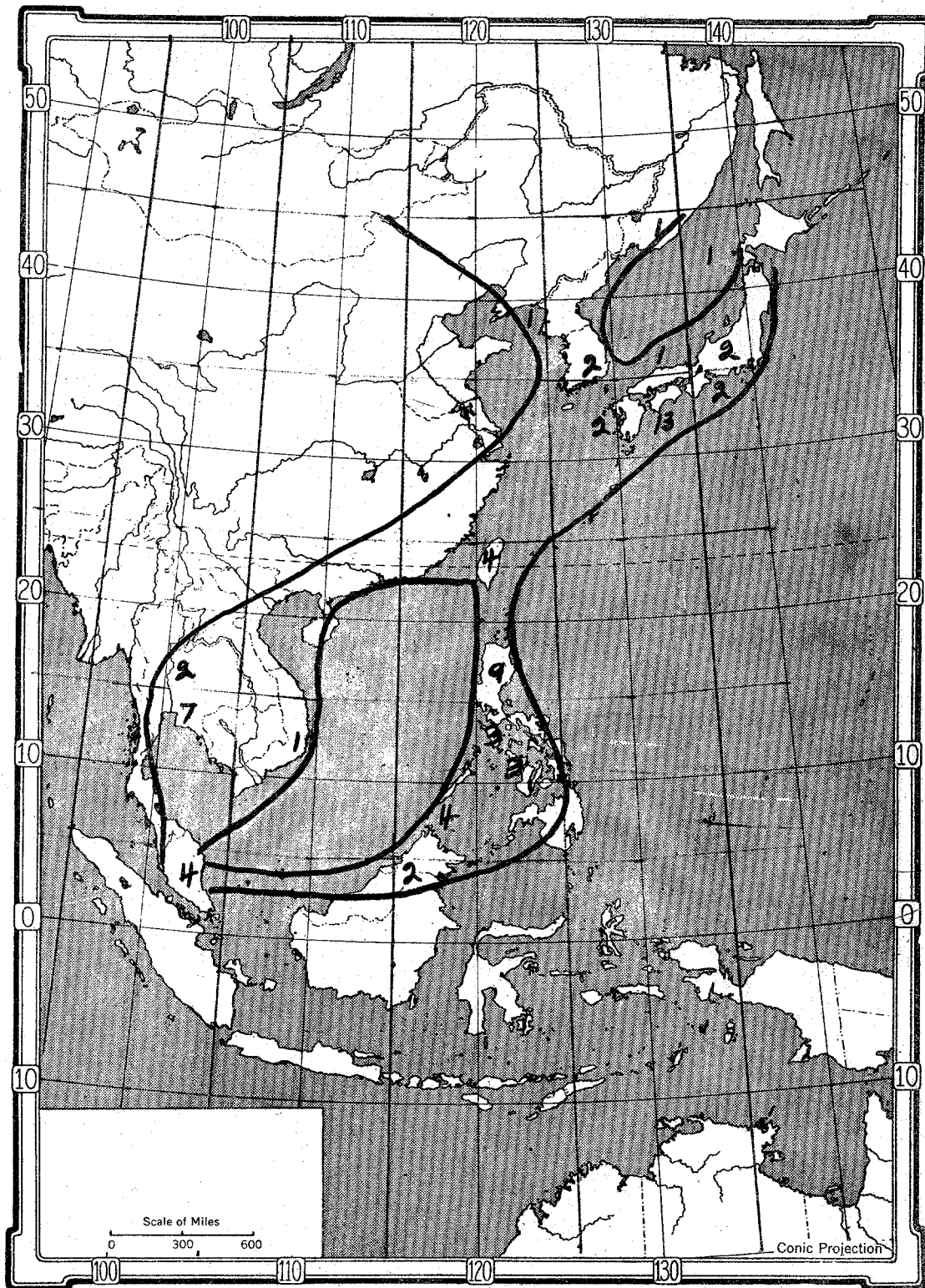


Fig. 14 Migration routes of the House Swallows ringed in Korea, Japan and Taiwan. Figures indicate the number of recoveries from each five degree square.

TABLE 7. THE DISTRIBUTION OF ARDEID RECOVERIES

Place Where Ringed	Number Ringed	Recoveries	% of Recovery by Area	
Japan	16, 000	211	Japan	72.0
			Taiwan	2.3
			Philippines	24.6
			At sea	.9
Korea	1, 900	17	Korea	70.5
			Philippines	24.5
Taiwan	19, 000	162	Taiwan	16.0
			Japan	1.2
			Philippines	81.4
			Borneo	.6
			Pulau Island	1.2
Philippines	1, 400	36	Philippines	88.8
			Borneo	2.7
			Taiwan	2.7
			Japan	2.7
			At Sea	2.7
			Malaya	100.0
Java	100.0			
Eastern Siberia	Unknown	7	Korea	14.2
			Thailand	57.1
			Malaya	28.7

Again China is a stumbling block for a complete understanding of the ardeid flyways. Table 7 lists the areas of recoveries for each ringed population as percentages of those recovered. It is not necessary to adjust these to indicate that the Philippines is the overwintering area for Japan and Taiwan reared ardeids and for a segment of the Korean ones. The flyway is obviously an inter-island one for several birds have been reported from ships, and from islands as far at sea as Pulau, Fig. 15.

Before China was sealed off earlier reports indicated that a segment of the Japanese ardeid population reached south-eastern China for winter ranges. This is probably also true of Korean reared birds.

No rings from Eastern Siberia have been reported to us from the Philippines, but they may have been reported directly to Moscow. Four recoveries in Thailand and two in Malaya indicate that mainland reared ardeids are using the eastern flyway of China.

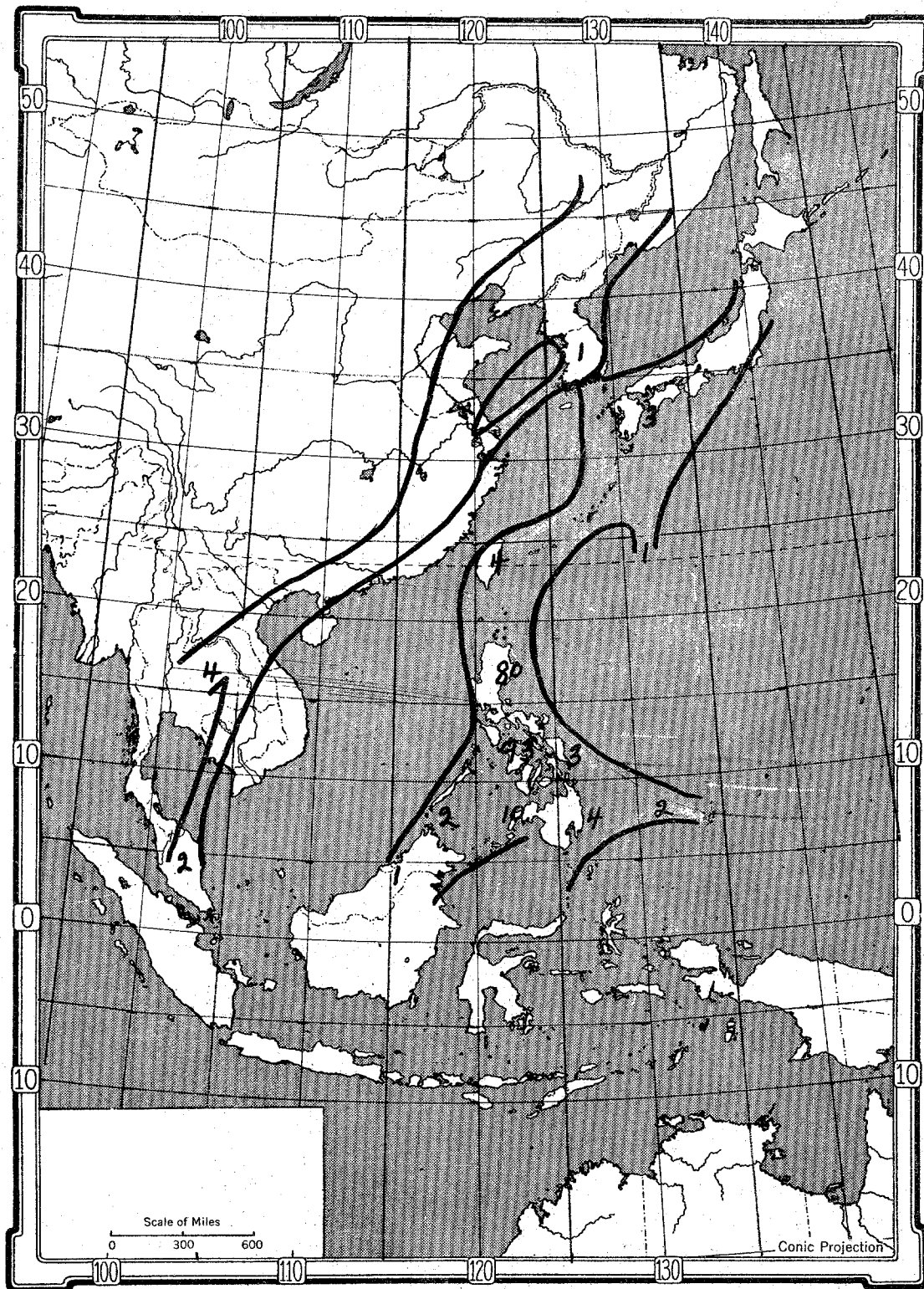


Fig. 15. Migration routes of ardeids banded in Japan, Korea, Eastern Siberia, and Taiwan. Figures indicate the number of recoveries from each five degree square.

THE DUCKS

Duck banding under MAPS sponsorship has been done only in India and Japan. From the standpoint of duck distribution and migration these would represent eastern and central populations of Eurasia. Since no duck ringing was done in Pakistan, Burma, or Thailand the possibility of intervening routes between those demonstrated by the central and eastern populations has not been investigated. Information from Russian ornithologists (correspondence) indicates that their records show a flyway across China into the Irawaddy and Brahmaputra valleys.

Twenty species of ducks were ringed during these studies; 850 in Japan and 10,400 in India. The bulk of the ringing in Japan was done in the vicinity of Tokyo and that in India at the Bharatpur Bird Sanctuary. Duck hunting in USSR is a popular sport for 259 of the Indian ringed ducks were reported (2.4%) and 43 of the Japan banded birds (5.0%)

The recoveries from Bharatpur birds indicate that the ducks move north through the east edge of West Pakistan, Jammu and Cashmere nearly to the 40th parallel before they spread out in a wide sweep across northern Asia from 40° to 125° E longitude, a breeding range extending over 2,000 miles. Those ducks originating from their wintering grounds in Japan move north and disperse east and west. Like those from northern India the dispersal is more to the east. Their breeding range extends from 110 to 170° E. longitude with only a slight overlap with those from India. This range is about five hundred miles less than that of the birds going to Northern India. The distribution of recoveries, which reflects human populations and hunting pressures, are shown in Fig. 16.

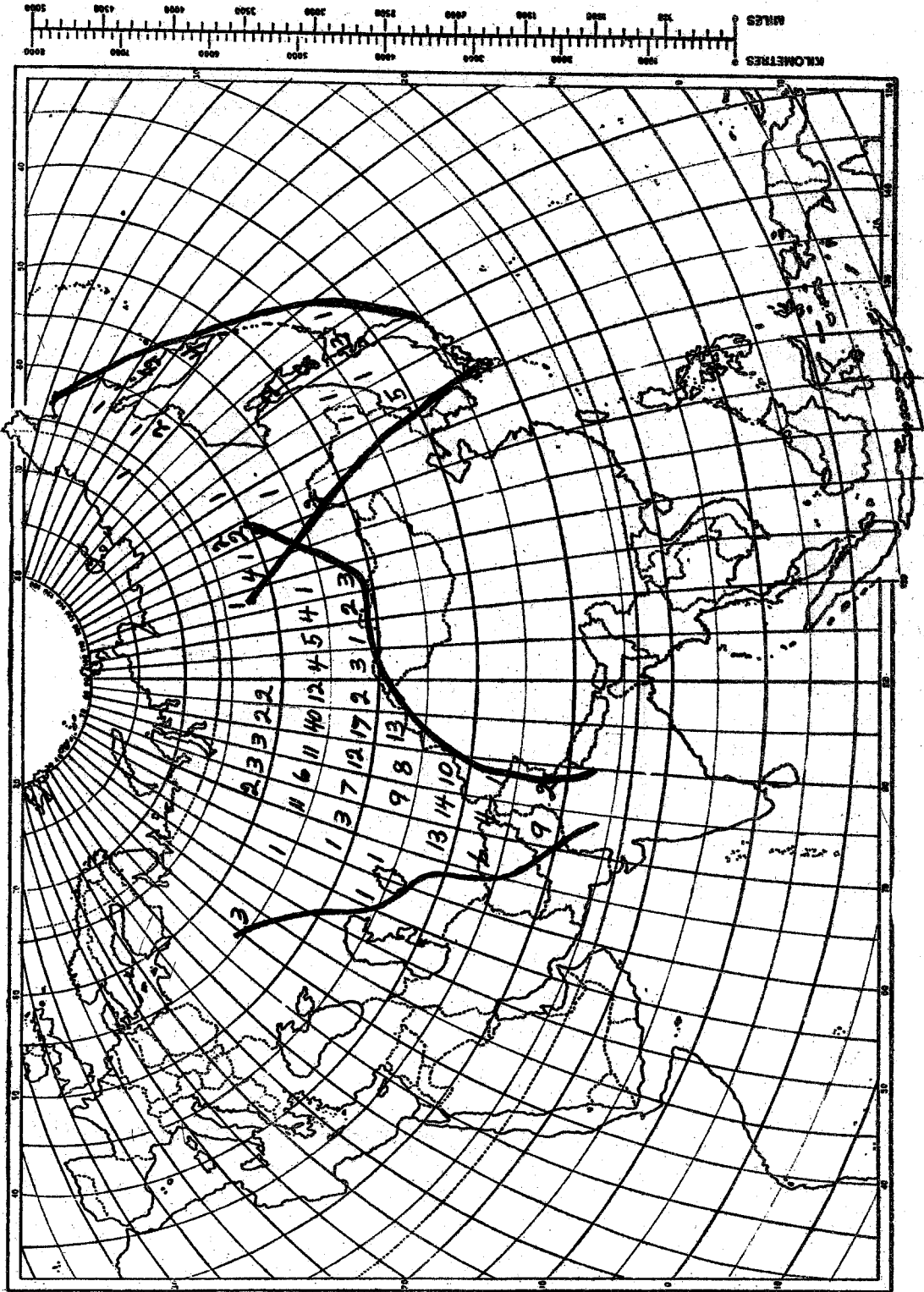


Fig. 16. The migration patterns of ducks ringed in India and in Japan. Figures indicated the recoveries from each five degree square.

OTHER SPECIES

The MAPS 1968 Annual report lists recoveries of other species. These have been augmented by further recoveries in 1969. Summaries of these by groups are in preparation and will be published at a later date.

SOME SURVIVAL RECORDS

There are now more than 40,000 records in the files of individuals of 551 species that have been captured more than once. These provide survival records on some species up to ten years (the date when ringing was first started in Malaya). These data are being compiled and will be prepared for later publication.

Among the present records of band recoveries there are seven species recovered in numbers great enough to indicate rate of survival unrelated to the period since the bird was ringed. For example, of 428 House Swallow adults recaptured or recovered 18 had lived more than four years. No percentage of survival can be given here as the length of time since the birds were ringed is not given. Tables 8 and 9 list these data.

TABLE 8. THE NUMBER OF JUVENILE BIRDS KNOWN TO HAVE SURVIVED FOR PERIOD UP TO SEVEN YEARS SINCE BANDED.

	MONTHS													Over 84
	0-1	1-3	3-6	6-12	12-18	18-24	24-30	30-36	36-48	48-60	60-72	72-84		
Cattle Egret	77	77	65	41	27	18	13	10	3					
Little Egret	29	27	22	11	6	4	1	1						
Black-crowned Night Heron	20	19	15	8	7	2	2							
Pintail Duck	2	2	2	2	2	1	1	1	1	1		1		
Teal	1	1	1	1										
Gray-faced Buzzard	21	18	14	9	8	4	4	1						
House Swallow	31	27	26	20	9	7	6	2						

TABLE 9. THE NUMBER OF ADULT BIRDS KNOWN TO HAVE SURVIVED FOR PERIODS UP TO SEVEN YEARS SINCE BANDED.

	MONTHS													Over 84
	0-1	1-3	3-6	6-12	12-18	18-24	24-30	30-36	36-48	48-60	60-72	72-84		
Cattle Egret	73	72	61	41	22	13	7	4						
Little Egret	84	71	52	40	16	12	6	4	3	1				
Black-crowned Night Heron	104	80	62	33	18	9	5	3	3	1	1	1	1	
Pintail Duck	78	74	66	56	28	19	10	7	2	1				
Teal	255	206	164	126	61	40	24	18	10	5				
Grey-faced Buzzard	66	52	46	25	20	15	12	7	7	2	2	2	1	
House Swallow	428	390	354	286	189	138	104	65	50	18				

MIGRATORY ANIMAL PATHOLOGICAL SURVEY

ANNUAL PROGRESS REPORT

1969

PART III

AVIAN ECTOPARASITES

INTRODUCTION

Identifications and descriptions of new species continue to accumulate and the number of ectoparasites or arthropods found on living birds has now reached 200 genera and 352 species. These have been from more than 12,000 collections involving 863 species of birds. It is estimated that there are about 2,000 species of birds in Asia so this represents collections from 43% of the species. These arthropods are listed in Table 10. This list includes the number of host families and species on which each parasite was found. The list of hosts per species of parasite is under preparation and will be published later.

In the 1968 Annual Report the ectoparasites for 739 species of birds were listed per hosts. This list will be augmented by new data and published in the near future.

It is not known how assiduously the various field teams worked to obtain ectoparasites from each species of bird that they captured. Considering only those parasites identified to species there were 84 identifications from 59 species of birds in the temperate areas, Japan and Korea, an average of 1.42 parasite species per bird species. Among the seven tropical and subtropical stations there were 617 identifications from 404 bird species or 1.53 per bird species. The largest number of identification has been from Thai collections, 363 species of parasites from 207 species of birds, 1.75 per species.

TABLE 10. LIST OF ARTHROPODS COLLECTED FROM ASIAN BIRDS AND THE NUMBER OF FAMILIES AND SPECIES UPON WHICH THEY WERE FOUND.

ACARINA		
PROSTIGMATA		
Species	Host Family	Host Species
CHEYLETIDAE		
<u>Ornithocheyla</u> sp.	1	1
MESOSTIGMATA		
RHINONYSSDAE		
<u>Mesonyssus psittaculæ</u> (Fain, 1962)	1	1
<u>Ptilonyssus</u> sp.	1	1
DERMANYSSIDAE		
<u>Dermanyssus</u> spp.	1	1
<u>D. hirundinis</u> (Hermann, 1804)	4	5
<u>Liponyssoides intermedius</u> (Evans & Till, 1964)	1	2
MACRONYSSIDAE		
<u>Ornithonyssus</u> sp.	1	1
<u>O. bursa</u> (Berlese, 1888)	8	13
<u>O. sylviarum</u> (Canestrini & Fanzago, 1877)	12	35
<u>Pellonyssus</u> spp.	3	3
<u>P. biscutatus</u> (Hirst, 1921)	1	3
<u>P. reedi</u> (Zumpt & Patterson, 1952)	3	3
<u>P. trachyphoni</u> Till, 1964	2	3
LAELAPIDAE		
<u>Echinonyssus nasutus</u> Hirst, 1925	1	1
<u>Androlaelaps disimilis</u> (Asanuma, 1953)	2	5
<u>A. haydocki</u> (Till, 1963)	2	2
<u>A. crispus</u> (Grokhovskaya & Nguyen-Huan-Hoe, 1961)	1	1
IXODIDES		
ARGASIDAE		
<u>Argas</u> sp.	2	2
<u>A. (Argas) japonicus</u> Yamaguti, Clifford, and Tipton, 1968	1	1

Species	Host Family	Host Species
<u>A. (Persicargas) robertsi</u> Hoogstraal, Kaiser and Kohls, 1968	2	2
IXODIDAE		
<u>Anblyomma</u> spp	6	12
<u>A. geoemydae</u> (Cantor, 1847)	3	4
<u>Dermacentor</u> sp.	2	2
<u>Haemaphysalis</u> spp.	13	31
<u>H. doenitzi</u> Warburton and Nuttall, 1909	6	9
<u>H. kutchensis</u> Hoogstraal and Trapido, 1963	3	3
<u>H. ornithophila</u> Hoogstraal and Kohls, 1959	1	1
<u>H. papuana</u> Thorell, 1882	1	1
<u>H. wellingtoni</u> Nuttall and Warburton, 1907	3	6
<u>Hyalomma</u> spp.	4	5
<u>H. narginatum</u> subsp.	1	1
<u>Ixodes</u> spp.	8	21
<u>I. granulatus</u> Supino, 1897	1	1
<u>I. turdus</u> (Scopoli, 1763)	1	3
TROMBIDIFORMES		
MYOBIDAE		
<u>Harpirhynchus</u> sp.	1	1
TROMBICULIDAE		
<u>Blankartia acuscutellaris</u> (Walch, 1922)	5	4
<u>Eutrombicula wichmanni</u> (Oudemans, 1905)	7	5
<u>Helenicula kohlsi</u> (Philip and Woodward, 1946)	1	1
<u>H. lanius</u> (Radford, 1946)	1	1
<u>H. scanloni</u> Domrow and Nadchatram, 1964	1	1
<u>H. simena</u> (Fsu and Chen, 1957)	6	3
<u>Leptotrombidium</u> spp.	15	7
<u>L. akamushi</u> (Brumpt, 1910)	2	2
<u>L. arenicola</u> Traub, 1960	1	1
<u>L. arvina</u> (Schluger, et al, 1960)	6	4
<u>L. bodense</u> (Gunther, 1940)	7	5
<u>L. deliense</u> (Walch, 1922)	44	14
<u>L. elisbergi</u> Traub and Lakshana, 1966	1	1
<u>L. keukenschrijveri</u> (Walch, 1923)	6	5
<u>L. lanceolatum</u> (Womersley, 1952)	1	1
<u>L. nakatae</u> Nadchatram and Traub, 1964	1	1
<u>L. rapmundi</u> Nadchatram and Upham, 1966	1	1
<u>L. scanloni</u> Traub and Lakshana, 1966	5	4
<u>L. scutellare</u> Nagayo, et al, 1966	53	16
<u>L. subintermedium</u> Jameson and Toshioka, 1954	2	1
<u>L. sylvestre</u> (Audy and Traub, 1950)	1	1

Species	Host Family	Host Species
<u>Lorillatum</u> sp.	1	1
<u>Mackiena</u> (<u>Tinpinna</u>) <u>migratoria</u> Nadchatram and Wilson, 1969.	1	1
<u>Neoschoengastia</u> spp.	3	4
<u>N. heynemani</u> Nadchatram and Upham, 1966	2	2
<u>N. longipes</u> Nadchatram, 1967	3	4
<u>N. solitus</u> Nadchatram, 1967	4	8
<u>Neoschoengastoides</u> spp.	1	1
<u>Neotrombicula</u> sp.	1	1
<u>Odontacarus audyi</u> (Radford, 1946)	6	11
<u>Schoengastia dartevellei</u> Vercammen-Grandjian, 1958	1	1
<u>S. rectangulare</u> (Womersley, 1952)	1	1
<u>S. vieta</u> Gater, 1932	2	3
<u>Siseca rara</u> (Walch, 1923)	5	5
<u>Trisetica melvini</u> (Traub and Evans, 1950)	1	1
<u>Toritrombucula</u> sp.	1	1
<u>T. asa</u> Nadchatram, 1967	2	3
<u>T. densipiliata</u> (Walch, 1922)	10	19
<u>Trombicula megaderma</u> Vercammen-Grandjian and Nadchatram, 1963	1	1
<u>T. uphami</u> Nadchatram, 1967	3	6
<u>Walchiella oudemansi</u> (Walch, 1923)	2	3

SARCOPTIFORMES

EPIDERMOPTIDAE

<u>Strelkoviacarus</u> spp.	4	4
<u>Dermataphagoides</u> sp.	1	1

ANALGIDAE

<u>Analges</u> spp.	25	88
<u>Anhemialges</u> spp.	13	29
<u>Anisodiscus</u> spp.	6	10
<u>Berlesella</u> spp.	1	4
<u>Dicamaralges</u> sp.	1	1
<u>Hemialges</u> spp.	4	6
<u>Ingrassiella</u> spp.	4	14
<u>Leptosphyra</u> spp.	2	2
<u>Megninia</u> spp.	5	8
<u>Megniniella</u> spp.	4	6

Species	Host Family	Host Species
	10	26
<u>Mesalges</u> spp.	1	1
<u>Metanalges</u> sp.	1	1
<u>Pandalura</u> sp.	1	1
<u>Petitota</u> sp.	1	1
<u>Protalges</u> sp.	1	1
<u>Pseudalloptinus</u> sp.	1	1
<u>Psoromorphus</u> sp.	1	1
<u>Pteralloptes</u> sp.	3	5
<u>Radfordalges</u> spp.	6	7
<u>Therisalges</u> spp.	11	22
<u>Xolalges</u> spp.		
PTEROLICHIDAE	1	1
<u>Bonnetella</u> sp.	2	3
<u>Bychovskiata</u> spp.	1	1
<u>Calaobia</u> sp.	2	4
<u>Chauliacia</u> spp.	3	4
<u>Coccylichus</u> spp.	2	2
<u>Coraciacarus</u> spp.	2	2
<u>Eustathia</u> spp.	1	4
<u>Falculifer</u> spp.	3	3
<u>Gabucinia</u> spp.	3	8
<u>Grallobia</u> spp.	3	6
<u>Grallolichus</u> spp.	2	2
<u>Hymenolobus</u> spp.	1	1
<u>Membranolobus</u> sp.	5	13
<u>Mouchetia</u> spp.	5	8
<u>Pterolichus</u> sp.	14	28
<u>Pteronyssoides</u> spp.	21	74
<u>Pteronyssus</u> spp.	1	1
<u>Ptiloxenus</u> sp.	1	3
<u>Xiphiurus</u> sp.		
AVENZOARIIDAE	2	4
<u>Avenzoaria</u> spp.		
PROCTOPHYLLODIDAE	2	3
<u>Allanalges</u> spp.	1	1
<u>A. podagricus</u> (Trouessart, 1899)	1	1
<u>Ardeacarus</u> sp.	7	18
<u>Bicentralges</u> spp.		

Species	Host Family	Host Species
<u>Bicentralges caulatus</u> Orwig, 1968	1	4
<u>B. coalitus</u> Orwig, 1968	1	1
<u>B. discinctus</u> Orwig, 1968	2	2
<u>B. vebulla</u> Orwig, 1968	1	1
<u>B. leiophyllus</u> (Gaud and Mouchet, 1957)	2	2
<u>B. longivasatus</u> Orwig, 1968	1	2
<u>B. miscellus</u> Orwig, 1968	2	2
<u>B. orientalis</u> Orwig, 1968	2	2
<u>Brephosceles</u> spp.	2	2
<u>B. charadrii</u> Dubinin, 1951	2	5
<u>Calcealgae</u> spp.	1	1
<u>C. cyathoplax</u> Gaud, 1952	7	15
<u>C. malayensis</u> Orwig, 1968	1	1
<u>C. montanus</u> Orwig, 1968	1	1
<u>C. yunkerii</u> Gaud, 1962	1	1
<u>Hemicalcealgae</u> spp.	1	1
<u>Monojoubertia</u> spp.	3	5
<u>Neocalcealgae</u> spp.	6	15
<u>N. angustus</u> Orwig, 1968	2	7
<u>N. cuspidatus</u> Orwig, 1968	1	1
<u>N. emarginatus</u> Orwig, 1968	2	2
<u>N. inauditus</u> Orwig, 1968	1	1
<u>N. segregatus</u> Orwig, 1968	1	2
<u>Proctophyllodes</u> spp.	1	4
<u>P. anthi</u> Vitzthum, 1922	28	122
<u>P. ateri</u> Fritsch, 1961	1	1
<u>P. capensis</u> Atyeo and Braasch, 1966	1	1
<u>P. capitatus</u> Atyeo and Braasch, 1966	1	1
<u>P. ceratophyllus</u> Atyeo and Braasch, 1966	1	1
<u>P. cotyledon</u> Trouessart, 1899	1	1
<u>P. curtiphyllus</u> Atyeo and Braasch, 1966	4	11
<u>P. glandarinus</u> (Koch, 1841)	1	1
<u>P. hylocichlae</u> Atyeo and Braasch, 1966	2	2
<u>P. leptocaulus</u> Gaud, 1957	2	2
<u>P. mcclurei</u> Atyeo and Braasch, 1966	1	1
<u>P. megaphyllus</u> Trouessart, 1885	1	1
<u>P. motacillae</u> Gaud, 1953	1	1
<u>P. musicus</u> Vitzthum, 1922	1	3
<u>P. rebeculinus</u> (Koch, 1841)	1	1
<u>P. stachyris</u> Atyeo and Braasch, 1966	1	1
<u>P. stenophyllus</u> Gaud and Mouchet, 1957	1	1
<u>P. stylifer</u> (Buchholz, 1896)	1	5
<u>P. truncatus</u> Robin, 1877	1	3
	1	1

Species	Host Family	Host Species
<u>P. vassilevi</u> Atyeo and Braasch, 1966	1	1
<u>P. vitzthumi</u> Fritsch, 1961	1	1
<u>P. weigoldi</u> Vitzthum, 1922	1	3
<u>Proterothrix</u> sp.	1	1
<u>Pseudalges</u> sp.	1	2
<u>Pterodectes</u> spp.	31	149
<u>Pterophagus</u> sp.	1	1
<u>Thysanocercus</u> spp.	1	3
<u>Trouessartia</u> spp.	32	163
<u>Uniscutalges</u> sp.	1	1

FREYANIDAE

<u>Dermonoton</u> sp.	1	3
<u>Freyana</u> sp.	1	1
<u>Kramerella</u> sp.	1	1

VEXILLARIIDAE

<u>Oustaletia</u> sp.	1	1
<u>Pterocolurus</u> sp.	1	1
<u>Vexillaria</u> sp.	1	1

INSECTA

COLLEMBOLA

ENTOMOBRYIDAE

<u>Lepidocyrtus</u> sp.	1	1
<u>Entomobrya nivalis</u> Linnaeus	1	1

ISOTOMIDAE

<u>Isotomurus palustris</u> Muller	1	1
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MALLOPHAGA

PHILOPTERIDAE

<u>Acidoproctus emersoni</u> Timmermann, 1962	1	1
<u>Alcedoecus</u> sp.	1	3
<u>A. annulatus</u> Ansari, 1956	1	1
<u>A. constrictus</u> Tendeiro, 1965	1	1
<u>A. incisus</u> Tendriro, 1965	1	1
<u>A. latigenitalis</u> Eichler, 1944	1	1
<u>A. mystacinus</u> (Nitzsch, 1866)	1	1
<u>Alcedoffula</u> spp.	1	4
<u>A. alcedinis</u> (Denny, 1842)	1	1
<u>A. ceycis</u> Tendeiro, 1967	1	1

Species	Host Family	Host Species
<u>Anaticola anseris</u> (Linnaeus, 1758)	1	2
<u>A. crassicornis</u> (Scopoli, 1763)	1	3
<u>Anatoecus</u> sp.	1	1
<u>Ardeicola</u> sp.	2	3
<u>A. expallidus</u> Blagoveshtchensky, 1940	1	1
<u>A. lepidus</u> (Nitzsch, 1866)	1	1
<u>Auricotes</u> sp.	1	1
<u>Bruelia</u> spp.	21	80
<u>B. daumae</u> (Clay, 1936)	1	1
<u>B. domestica</u> (Kellogg and Chapman, 1899)	1	1
<u>B. fulmeki</u> Eichler, 1957	1	1
<u>B. glandarii</u> (Denny, 1842)	1	1
<u>B. gracilis</u> (Burmeister, 1838)	1	1
<u>B. juno</u> (Giebel, 1874)	1	1
<u>B. kratochavili</u> Balat, 1958	1	1
<u>B. saliemii</u> Ansari, 1957	1	1
<u>B. straminea</u> (Denny, 1842)	1	1
<u>Buceronirmus</u> sp.	1	1
<u>B. albescens</u> (Piaget, 1890)	1	1
<u>B. cephalotus</u> (Nitzsch, 1866)	1	1
<u>Bucerophagus forcipatus</u> (Nitzsch, 1874)	1	1
<u>Capraïella subcuspidata</u> (Burmeister, 1838)	1	1
<u>Carduceps</u> sp.	1	2
<u>C. cingulatus</u> (Denny, 1842)	1	1
<u>C. fulvofasciatus</u> (Grube, 1851)	1	1
<u>C. meinertzhageni</u> Timmermann, 1954	1	1
<u>C. zonarius</u> (Nitzsch, 1866)	1	6
<u>Coloceras</u> sp.	1	1
<u>C. streptopeliae</u> Carriker, 1949	1	1
<u>Columbicola</u> sp.	1	1
<u>C. guimaraesi</u> Tendeiro, 1962	1	1
<u>C. mjobergi</u> Eichler, 1943	1	1
<u>C. turturis</u> (Uchida, 1917)	1	1
<u>Craspedorrhynchus</u> sp.	1	1
<u>C. aquilinus</u> (Denny, 1842)	1	1
<u>C. pachypus</u> (Giebel, 1874)	1	1
<u>C. platystomus</u> (Burmeister, 1838)	1	1
<u>C. spathulatus</u> (Giebel, 1874)	1	1
<u>Cuclotogaster</u> sp.	1	1
<u>C. cinereus</u> (Nitzsch, 1866)	1	1
<u>Cuculoecus</u> sp.	1	1
<u>Cummingsiella aurea</u> Hopkins, 1949	1	1

Species	Host Family	Host Species
<u>Degeeriella</u> spp.	2	4
<u>D. beaufacies</u> Ansari, 1955	1	2
<u>D. elani</u> Tendeiro, 1955	1	1
<u>D. fulva</u> (Giebel, 1874)	1	2
<u>D. nisus frater</u> (Piaget, 1880)	1	1
<u>D. regalis regalis</u> (Giebel, 1874)	1	2
<u>D. rufa rufa</u> (Burmeister, 1838)	1	1
<u>Emersoniella halcyonis</u> Tendeiro, 1965	1	1
<u>Falcolipeurus suturalis</u> (Rudow, 1869)	1	1
<u>Falcolius samarensis</u> Clay, 1956	1	1
<u>Fulicoffula personata</u> Emerson and Price, 1967	2	2
<u>Goniocotes</u> spp.	1	4
<u>Goniodes</u> sp.	1	1
<u>G. astrocephalus</u> (Burmeister, 1838)	1	1
<u>G. curvicornis</u> (Nitzsch, 1866)s	1	1
<u>G. dentatus</u> (Rudow, 1870)	1	1
<u>G. indicus</u> (Kellogg and Paine, 1914)	1	1
<u>G. processus</u> Kellogg and Paine, 1914	1	1
<u>Halipeurus</u> sp.	2	2
<u>H. angusticeps</u> (Piaget, 1880)	1	1
<u>Lipeurus</u> sp.	1	1
<u>L. introductus</u> Kellogg, 1896	1	1
<u>Lunaceps</u> spp.	1	6
<u>L. falcinellus</u> Timmermann, 1954	1	1
<u>L. holophaeus</u> Timmermann, 1954	1	1
<u>L. numenii phaeopi</u> (Denny, 1842)	1	1
<u>L. numenii lissmanni</u> Timmermann, 1954	1	1
<u>Meropoecus</u> sp.	1	2
<u>M. capri</u> Conci, 1941	1	1
<u>M. smithi</u> Emerson and Elbel, 1957	1	1
<u>Mulcticola deignani</u> Emerson and Elbel, 1957	1	1
<u>Neophilopterus completus</u> (Nitzsch, 1866)	1	1
<u>Oxylipeurus</u> sp.	1	1
<u>O. dentatus</u> (Sugimoto, 1934)	1	1
<u>O. formosanus</u> (Uchida, 1917)	1	1
<u>O. unicolor</u> (Piaget, 1880)	1	2
<u>Packyskelotes orthopleurus</u> (Nitzsch)	1	1
<u>Paranocophorus</u> sp.	1	1
<u>Pectinopygus</u> sp.	1	1
<u>P. gyricornis</u> (Denny, 1842)	1	1
<u>Penenirmus</u> spp.	3	8
<u>P. rafflesi</u> Dalgleish, 1967	1	1
<u>P. zeylanicus</u> Dalgleish, 1967	1	1

Species	Host Family	Host Species
<u>P. hibari</u> (Uchida, 1949)	1	1
<u>P. pici</u> (J. C. Fabricius, 1798)	1	1
<u>Philopterus</u> spp.	18	53
<u>P. coarctatus</u> (Scopoli, 1763)	1	1
<u>P. claviformis</u> (Piaget, 1885)	1	2
<u>P. excisus</u> subsp.	1	1
<u>P. excisus excisus</u> Nitzsch, 1818	1	1
<u>P. excisus microsomaticus</u> Tandon, 1955	1	1
<u>P. extraneus</u> (Piaget, 1885)	1	1
<u>P. rapax</u> (Zlotorzzycka 1964)	1	1
<u>Picicola</u> sp.	1	1
<u>P. candidus</u> (Nitzsch, 1866)	1	1
<u>P. mississippiensis</u> (McGragor, 1917)	1	1
<u>Quadriceps</u> spp.	4	6
<u>Q. anagrapsus</u> (Nitzsch, 1866)	1	1
<u>Q. assimilis major</u> (Kellogg, 1899)	1	2
<u>Q. assimilis ptyadis</u> (Seguy, 1949)	1	1
<u>Q. bicuspis</u> (Nitzsch, 1874)	1	1
<u>Q. charadrii orarius</u> (Kellogg 1896)	1	1
<u>Q. conformis</u> (Blagoveshtochensky, 1940)	1	2
<u>Q. dasi</u> Tandan 1952	1	1
<u>Q. ellipticus</u> (Nitzsch, 1866)	1	1
<u>Q. griseus</u> (Rudow, 1869)	1	1
<u>Q. hemichrous</u> (Nitzsch, 1866)	1	1
<u>Q. legatus</u> Timmermann, 1952	1	1
<u>Q. obscurus</u> (Burmeister, 1838)	1	2
<u>Q. ochropi</u> (Denny, 1842)	1	1
<u>Q. ptyadis</u> (Seguy, 1949)	1	1
<u>Q. quadrisetaceus</u> (Piaget, 1880)	1	1
<u>Q. ravus</u> (Kellogg, 1899)	1	1
<u>Q. semifissus semifissus</u> (Nitzsch, 1866)	1	1
<u>Q. separatus</u> (Kellogg and Kuwana, 1902)	1	1
<u>Q. strepsilaris</u> (Denny, 1842)	1	1
<u>Rallicola</u> spp.	1	5
<u>R. ferrisi</u> Emerson. 1955	1	1
<u>R. fulicae</u> (Denny, 1842)	1	1
<u>R. indicus</u> Emerson and Elbel	1	1
<u>R. minutus</u> (Nitzsch, 1866)	1	1
<u>R. ortygometrae</u> (Piaget, 1880)	1	2
<u>R. tabuensis</u> Emerson, 1966	1	1
<u>Rhynonirmus</u> spp.	1	1
<u>R. kingi</u> Emerson and Price 1969	1	1

Species	Host Family	Host Species
<u>Saemundsson</u> spp.	1	4
<u>S. chenamycha</u>	1	2
<u>S. conica</u> (Denny, 1842)	1	1
<u>S. gelochelidoni</u> Touleshkov	1	1
<u>S. hopkinsi</u> Clay, 1949	1	1
<u>S. lari</u> (O. Fabricius, 1780)	1	2
<u>S. meridiana</u> Timmermann, 1950	1	1
<u>S. orientalis</u> (Uchida, 1949)	1	1
<u>S. scolopacisphaeopodis</u> (Schrank, 1803)	1	1
<u>S. sterna</u> e (Linnaeus, 1758)	1	2
<u>S. tringae</u> (O. Fabricius, 1780)	1	1
<u>Strigiphilus</u> sp.	1	2
<u>S. heterogenitalis</u> Emerson and Elbel, 1957	1	5
<u>S. macrogenitalis</u> Emerson and Elbel, 1957	1	1
<u>S. marshalli</u> Clay	1	1
<u>S. siamensis</u> Emerson and Elbel, 1957	1	1
<u>S. tuleskovi</u> Balat, 1958	1	2
<u>Sturnidoecus</u> spp.	7	13
<u>S. capensis</u> (Giebel, 1874)	1	1
<u>S. ruficeps</u> (Nitzsch, 1866)	1	1
<u>Trabeculus hexacon</u> (Waterston, 1914)	1	1
<u>Turnicola</u> sp.	1	2
<u>T. angustissimus</u> (Giebel, 1866)	2	2
<u>T. nigrolineatus</u> (Piaget, 1880)	1	1
LAEMOBOTHRIIDAE		
<u>Laemobothrion</u> sp.	1	1
<u>L. chloropodis</u> (Schrank, 1903)	1	1
<u>L. maximum</u> (Scopoli, 1763)	1	2
<u>L. tinnunculi</u> (Linnaeus, 1758)	1	1
MENOPONIDAE		
<u>Actornithophilus</u> spp.	2	4
<u>A. bicolor</u> (Piaget, 1880)	1	1
<u>A. erinaceus</u> Timmermann, 1954	1	1
<u>A. flumineus</u> Clay, 1962	1	1
<u>A. holopteri</u> (Mjoberg, 1910)	1	1
<u>A. incusus</u> (Piaget, 1880)	1	1
<u>A. orchraceus</u> (Nitzsch, 1818)	2	7
<u>A. paludosus</u> Clay, 1962	1	1
<u>A. piceus</u> (Denny, 1842)	1	3
<u>A. pustulosus</u> (Piaget, 1880)	1	1
<u>A. umbrinus</u> (Burmeister, 1838)	1	4

Species	Host Family	Host Species
<u>Amyrsidea elbeli</u> Emerson and Stojanovich, 1963	1	1
<u>A. polytricha</u> (Eichler, 1947)	1	1
<u>A. uniseriata</u> (Piaget, 1880)	1	1
<u>A. ventralis</u> (Nitzsch, 1866)	1	1
<u>Austromenopon</u> spp.	3	8
<u>A. aegialitidis</u> (Durrant, 1906)	1	2
<u>A. alpinum</u> Timmermann 1954	1	1
<u>A. crocatum</u> (Nitzsch, 1866)	1	1
<u>A. phaeopodis</u> (Schrank, 1802)	1	1
<u>Ciconiphilus</u> sp.	1	1
<u>C. decimfasciatus</u> (Boisduval and Iacordaire, 1835)	1	3
<u>C. quadripustulatus</u> (Burmeister, 1838)	1	1
<u>Colpocephalum</u> sp.	1	2
<u>C. ecaudati</u> Price and Been, 1963	1	1
<u>C. fregili</u> Denny, 1842	1	2
<u>C. tirkhan</u> (Ansari, 1951)	1	1
<u>C. trachelioti</u> Price and Been, 1963	1	1
<u>C. turbinatum</u> Denny, 1842	1	1
<u>Cuculiphilus</u> sp.	1	1
<u>C. fasciatus</u> (Scopoli, 1763)	1	1
<u>C. snodgrassi</u> (Kellogg and Kuwana, 1902)	1	4
<u>C. upsak</u> Ansari, 1951	1	1
<u>Dennyus</u> spp.	1	7
<u>D. distinctus</u> Ferris, 1916	1	2
<u>D. clayae</u> Nakagawa, 1959	1	1
<u>D. emersoni</u> Ledger, 1970	1	1
<u>D. giganteus</u> Emerson and Price	1	1
<u>D. elliotti</u> Ledger, 1970	1	1
<u>D. minor</u> (Kellogg and Paine, 1914)	1	1
<u>D. orientalis</u> Buttiker	1	1
<u>D. thompsoni</u> Ledger, 1970	1	1
<u>Eureum salangane</u> Eichler, 1942	1	1
<u>Hohorstiella</u> sp.	1	1
<u>Kelerimenopon thompsoni</u> (Emerson and Stojanovich, 1965)	1	2
<u>Kurodaia</u> sp.	1	1
<u>K. deignani</u> Elbel and Emerson, 1960	1	1
<u>K. platyclypeatum</u> (Piaget, 1887)	1	4
<u>Machaerilaemus</u> sp.	1	2
<u>Menacanthus</u> spp.	21	53
<u>M. abdominalis</u> (Piaget, 1880)	1	1

Species	Host Family	Host Species
<u>M. alaudae</u> (Schrank, 1776)	1	1
<u>M. nogoma</u> (Uchida, 1926)	1	1
<u>M. sinuatus</u> Burmeister, 1838	1	2
<u>M. tibialis</u> (Piaget, 1885)	1	1
<u>Menopon gallinae</u> (Linnaeus, 1758)	1	1
<u>Meromenopon</u> sp.	1	2
<u>Myrsidae</u> spp.	28	192
<u>M. chiapensis</u> Zavaleta, 1944	1	1
<u>M. cyanopycae</u> Uchida, 1926	1	1
<u>M. cyrtostigma</u> (Kellogg and Chapman, 1902)	1	1
<u>M. dukhunensis</u> Ansari, 1951	1	1
<u>M. franciscoloi</u> Conci, 1942	1	1
<u>M. grandiceps</u> (Piaget, 1880)	1	1
<u>M. invadens</u> (Kellogg and Chapman, 1902)	1	1
<u>M. ishizawai</u> Uchida, 1926	1	1
<u>M. pungens</u> (Piaget, 1885)	1	1
<u>M. pycnonoti</u> Eichler, 1949	1	12
<u>M. rustica</u> (Gieble, 1874)	2	2
<u>M. rindianus</u> Ansari, 1955	1	3
<u>M. sultanpurensis</u> Ansari, 1951	1	1
<u>M. takayamai</u> Uchida, 1926	1	1
<u>M. thoracica</u> (Giebel, 1874)	1	3
<u>M. trithorax</u> (Piaget, 1885)	1	1
<u>Procellariphaga longithoracica</u> (Piaget, 1880)	1	1
<u>P. paulula</u> (Kellogg and Chapman, 1899)	1	1
<u>Pseudomenopon</u> spp.	2	6
<u>P. pilosum</u> (Scopoli, 1763)	1	2
<u>P. rostratulae</u> Bedford, 1919	1	1
<u>Psittacomenopon</u> sp.	1	1
<u>Somaphantus</u> sp.	1	1
<u>Trinoton emersoni</u> Clay, 1863	1	1
<u>T. querquedulae</u> (Linnaeus, 1758)	1	4
RICINIDAE		
<u>Ricinus</u> spp.	6	10
<u>R. elongatus</u> (Olfers, 1816)	1	1
<u>R. fringillae</u> De Geer, 1778	1	3
<u>R. mugimaki</u> (Uchida, 1915)	1	1
PSOCOPTERA		
PERIPSOCIDAE		
<u>Ectopsocopsis cryptomeriae</u> (Enderlein)	1	1

Species	Host Family	Host Species
LIPOSCEIIDAE		
<u>Liposcelis</u> sp.	2	2
<u>L. entomophilus</u> (Enderlein)	1	1
<u>Embidopsocus trichurensis</u> Menon	1	1
ATROPIDAE		
<u>Lepinotus reticulatus</u> Enderlein	1	1
HEMIPTERA		
CIMICIDAE		
<u>Paracimex chaeturus</u> Ueshima 1969	1	2
COLEOPTERA		
CARABIDAE		
<u>Bembidion</u> sp.	1	1
ORTHOPERIDAE		
<u>Orthoperus</u> sp.	1	1
BRUCHIDAE		
<u>Callosobruchus maculatus</u> (Fabricius)	1	1
DIPTERA		
CERATOPOGONIDAE		
<u>Culicoides malayae</u> Macfie	3	3
<u>Forcipomyia</u> sp.	1	1
<u>Leptoconops</u> sp.	1	1
EPHYDRIDAE		
<u>Discocerina</u> sp.	1	1
CALLIPHORIDAE		
<u>Protocalliphora</u> sp.	1	1
SIMULIIDAE		
<u>Simulium indicum</u> Becker	1	1
HIPPOBOSCIDAE		
<u>Crataerina debilis</u> Maa	1	1

Species	Host Family	Host Species
<u>C. hirundinis</u> Linnaeus, 1758	1	1
<u>Icosta</u> spp.	7	10
<u>I. ardeae</u> Macquart	2	3
<u>I. chalcoplampra</u> (Speiser, 1904)	2	5
<u>I. elbeli</u> Maa, 1969	1	1
<u>I. fenestella</u> Maa, 1969	1	1
<u>I. holoptera</u>	4	6
<u>I. lonchurae</u> Maa, 1969	2	5
<u>I. longipalpis</u> (Macquart, 1835)	1	3
<u>I. macclurei</u> Maa, 1969	3	4
<u>I. maquilingsis</u> (Ferris, 1924)	1	1
<u>I. nigrita</u> (Perty, 1833)	1	1
<u>I. omnisetosa</u> Maa, 1969	1	1
<u>I. sensilis</u> Maa, 1969	5	8
<u>I. tarsata</u> Maa, 1969	1	1
<u>I. trita</u> (Speiser, 1905)	1	1
<u>Ornithoictona australasiae</u> (Fabricius, 1805)	1	1
<u>O. plicata</u> Von Olfers, 1816	7	11
<u>Ornithoicta</u> spp.	5	6
<u>O. bistativa</u> Maa, 1966	15	29
<u>O. curvata</u> Maa, 1963	4	4
<u>O. exilis</u> (Walker, 1861)	6	8
<u>O. momiyamai</u> Kishida, 1932	1	1
<u>O. rabori</u> Maa, 1966	1	1
<u>O. tridens</u> Maa, 1966	1	1
<u>O. unicolor</u> Speiser, 1900	5	9
<u>Ornithomya avicularia</u> (Linnaeus)	7	15
<u>O. biloba</u> Dufour, 1827	1	2
<u>O. chloropus</u> Bergroth	1	3
<u>O. comosa</u> Austen, 1930	1	5
<u>O. fuscipennis</u> Bigot, 1885	6	9
<u>O. medinalis</u> Maa, 1969	1	1
<u>O. metallica</u> (Schiner, 1864)	17	38
<u>Phtona nigrita</u> (Speiser, 1905)	1	1
<u>Pseudolynchia canariensis</u> (Macquart, 1840)	2	4
<u>P. garzettae</u> (Rondani, 1879)	1	1
NYCTERIBIIDAE		
<u>Eucampsipoda enermis</u> Theodor,	1	1
SIPHONAPTERA		
CERATOPHYLLIDAE		
<u>Callopsylla orneacus waterstoni</u> (Jordan)	1	1

Species

Host Family Host Species

HYMENOPTERA

FORMICIDAE

Pheidole sp.

1

1

Monomorium sp.

2

2

M. pharaonis (Linnaeus)

1

1

Lasius unbratus (Nylander)

1

1