

Taiwan New Year
Bird Count
2024 Annual Report



Taiwan New Year 2024 Annual Report

BIRD COUNT



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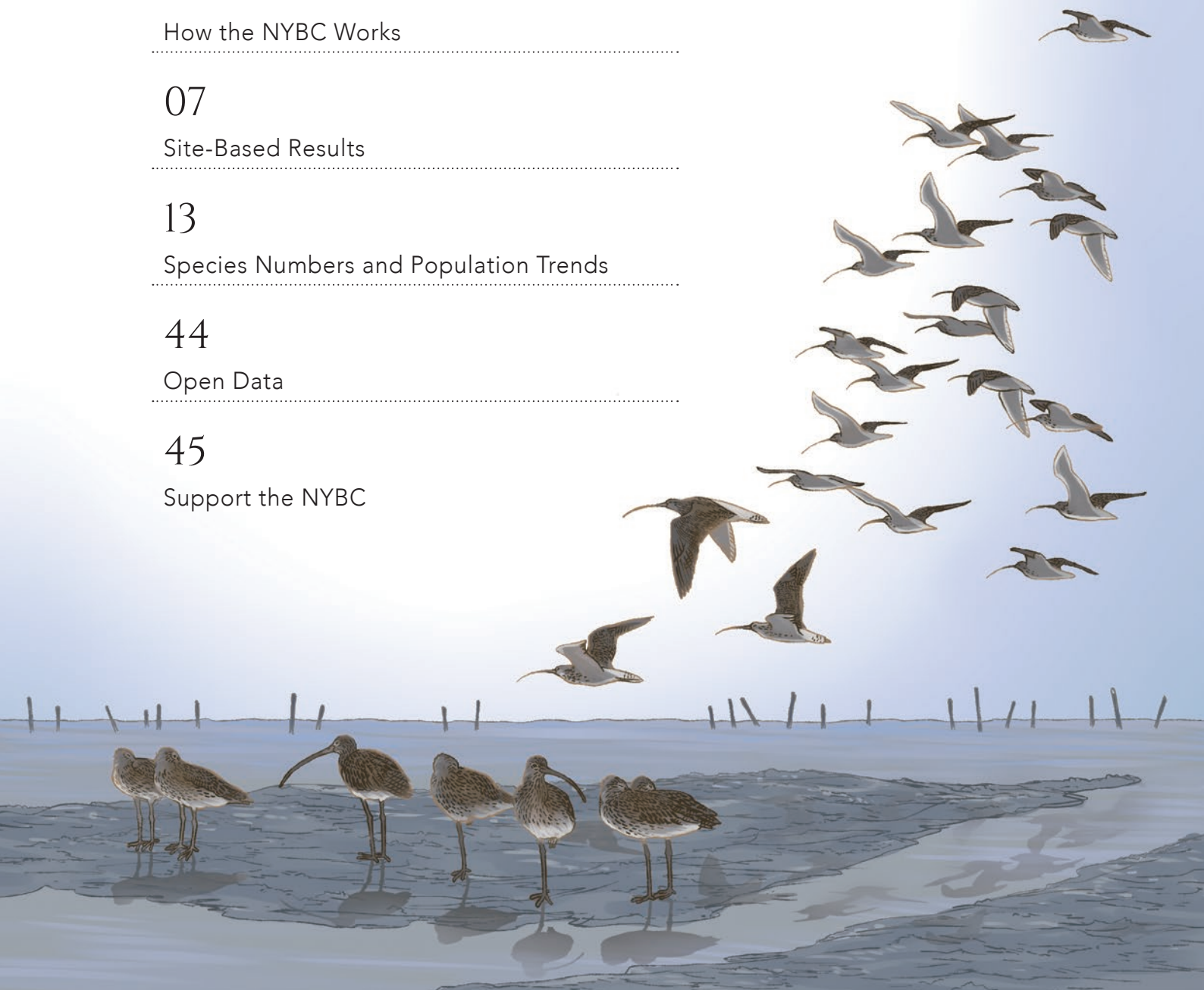
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Preface & Acknowledgements

Lin Ruey-shing

The Taiwan New Year Bird Count (NYBC) is a citizen science project that monitors the status and trends of wintering birds in Taiwan and its outlying islands. The 11th report presents the results of the 2024 count, which was conducted between December 16, 2023 and January 7, 2024. Over the 23-day survey, 878 participants recorded 394,483 individuals from 343 species in 172 sample circles across Taiwan proper, the Penghu and Matsu Archipelagos, and the Kinmen Islands. Thanks to the enthusiastic support of birders, partner organizations, donors, and sponsors, the eleventh consecutive year of the Taiwan NYBC has been successfully completed. The organizers gratefully acknowledge the support of the Forestry and Nature Conservation Agency, national park headquarters, E.SUN Bank, and other sponsors whose generosity has made this project possible.

This year's report also marks an important new milestone for the project. For the first time, the annual results include analyses of overwintering landbird

populations in addition to waterbirds. Most monitoring and research in the East Asian–Australasian Flyway (EAAF) have traditionally focused on migratory shorebirds, while coordinated efforts to track landbird populations remain relatively recent and limited in scope. In this year's report, the Taiwan NYBC contributes to this growing conversation with its citizen science data. The findings reveal concerning declines in several farmland and grassland species, such as the Red-throated Pipit (*Anthus cervinus*), Siberian Rubythroat (*Callope callope*), and Brown Shrike (*Lanius cristatus*). Regional differences were also observed: farmland birds declined most sharply in southwestern Taiwan, while forest birds showed notable declines in western Taiwan.

These trends serve as a warning that the loss of farmland and natural grasslands in recent years may be affecting not only breeding bird species, but also migratory landbirds that depend on these habitats to rest and refuel during winter. This underscores the need



to give greater weight to ecological balance in land-use planning and provides more precise regional references for future conservation work.

Meanwhile, waterbirds remain at the heart of the NYBC. With the inclusion of this year's data, we found that this year's mascot, the Eurasian Curlew (*Numenius arquata*), has declined by 74% compared to 2014. The Yilan Plain continues to be a hotspot of waterbird decline, suggesting that local conservation efforts alone are insufficient to counteract broader land-use changes across the flyway. By contrast, more positive trends were recorded along the Chianan Coast, demonstrating how effective habitat management and conservation measures can provide critical refuges for migratory species.

These findings, both sobering and hopeful, underscore the value of long-term citizen science monitoring. Only through consistent and sustained efforts can we track population changes and evaluate the effectiveness of conservation strategies. To further strengthen this work, the NYBC organizing team presented these results at the International Congress for Conservation Biology, sharing Taiwan's citizen science achievements with researchers across the East Asian–Australasian Flyway and contributing to ongoing international cooperation in bird conservation.

The Taiwan NYBC is organized by the Taiwan Wild Bird Federation (TWBF), the Wild Bird Society of Taipei (WBST), the Kaohsiung Wild Bird Society

(KWBS), and the Taiwan Biodiversity Research Institute (TBRI). The organizers would also like to give special thanks to Allen Lyu (呂翊維, TWBF), Scott Pursner (潘森識, TWBF), Chiang Kung-kuo (蔣功國, WBST), Lin Kun-hai (林昆海, KWBS), Lin Ruey-shing (林瑞興, TBRI), Chi Po-wei (紀博瑋, TBRI), Tsai Chih-yi (蔡芷怡, TBRI), and Lin Da-li (林大利, TBRI) for their tireless effort in making the first decade of the Taiwan NYBC a reality.

The organizers would also like to thank Tamako Diary and Daylily for the cover and interior illustrations, Ms. Jung Chao for assistance with data processing, and Tien-Ching Culture Enterprise for the design and layout of this annual report.

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For more information, please contact:

Mr. Allen Lyu
E-mail nybc@bird.org.tw

Dr. Lin Da-li
E-mail thrush1250@gmail.com

TEL +886-2-8663-1252 ext.19 FAX +886-2-2930-3595

Website <http://nybc.bird.org.tw>

Facebook <http://www.facebook.com/nybctaiwan>

Forward from our Friends



Ding Li Yong

Regional Flyway Coordinator,
BirdLife International (Asia)

The East Asian-Australasian Flyway is the world's most densely populated migratory flyway. Here, nearly a quarter of humanity live in close proximity to the habitats of migratory birds in some of the most densely populated cities in the world. The cities and towns migratory birds move through during the migrations can be incredibly inhospitable. Millions succumb in the process. The extent of the problem is not well understood and migratory landbirds such as raptors and many passerines have definitely not received the attention they deserve. With the decline of many of these species there is a fast-narrowing window of opportunity to conserve these birds, and this can only be achieved by bringing together everyone from professional scientists, governments and hobbyist nature lovers.

Citizen science has helped to narrow knowledge gaps on biodiversity, and migratory birds in a big way and is increasingly well positioned to help us to make decisions on how to conserve them. As the season for many citizen science initiatives kicks into place all over Asia, more than ever before we need to recognise the contributions of citizen scientists, many of them individuals who care about nature and are willing to sacrifice time to go out and count wildlife. As a conservation professional who started my career volunteering for bird counts, I have seen first-hand how data gathered by these dedicated individuals can guide real-world conservation actions. It is important that citizen scientists work together with researchers and others to bring together the information we need to drive conservation actions on the ground needed to stem further declines of the migratory species we share on this incredible migratory flyway.





Hankyu Kim

Assistant Professor,
Kyung Hee University, Republic of
Korea

As the Taiwan New Year Bird Count (TNYBC) celebrates over a decade of remarkable achievement, I want to extend my heartfelt gratitude to each of you—citizen scientists whose passion and perseverance have built one of the region's most valuable ecological datasets. Your sustained, high-quality observations have not only deepened our understanding of bird ornithology, but have become a cornerstone for evidence-based conservation decisions across East Asia.

Over the past ten years, Taiwan's citizen science in bird ecology and conservation has flourished—thanks to the unwavering support, active participation, and heartfelt engagement of bird-loving communities and dedicated colleagues across the country. Programs like TNYBC do more than collect data; they cultivate knowledge, foster public engagement, and inspire us to observe the natural world and its changes—reminding us that this is the very environment we live in.

Your long-term commitment to counting birds and compiling data nationwide is making a real difference. It provides robust scientific evidence on population trends and habitat conditions, helping us protect both birds and the ecosystems they depend on. TNYBC's dedication to long-term monitoring is a powerful investment in the future.

With its open data policy and a team of reviewers who help maintain data quality, TNYBC has grown into one of the strongest citizen science platforms along the East Asian–Australasian Flyway. It stands as a milestone in regional avian monitoring. Insights from TNYBC not only inform conservation efforts in Taiwan but also spark action across the migratory routes—at stopover sites, breeding grounds, and beyond. Taiwan is now setting a benchmark for regional citizen science programs, and efforts like yours are essential to addressing bird population changes and the global loss of biodiversity.

So as another counting season begins, we cheer you on. May your binoculars stay steady, your field notes (and phones!) stay dry, and your hearts stay inspired. You are not just counting birds—you are building hope, one feather at a time.

Hankyu Kim

Goals

- * Recording the wintering avifauna of Taiwan proper and its outlying islands
- * Mainstreaming biodiversity
- * Enjoying birding

How the NYBC Works

Rules for the Taiwan NYBC are based on the basic principles set out in the Christmas Bird Count. Over the course of 23 days (with January 1 serving as a midpoint), volunteer teams choose one 24-hour period to count all the birds within a circle sample area whose radius is three kilometers. Routes within sample areas are provided for teams by the organizers. Teams are composed of at least one leader, at least one person experienced in birdwatching and surveys, and supporting volunteers. Group numbers could range from as few as three to over 100. While doing their count, teams record species name, number of individuals, location of route(s)/observation area, date, start and end time, number of participants, survey methods and weather conditions. Survey methods vary and include line transects, counting flocks, area searches, and others.





Site-Based Results

Lin Da-li, Tsai Chi-yi, Chi Po-wei

This section covers the results achieved during the Taiwan NYBC 2024, which took place from December 16, 2023 to January 7, 2024. It also provides updates on recent progress in migratory waterbird research. The authors would like to sincerely thank all the volunteers, groups, donors, and sponsors for their support and participation which made this report possible.

During the 2024 Taiwan New Year Bird Count, 913 participants conducted bird surveys at 172 sampling sites over the course of 23 days. Sites were located throughout Taiwan proper, the Penghu Archipelago (澎湖群島), the Kinmen Islands (金門), the Matsu Archipelago (馬祖列島), and the Dongsha Islands (東沙群島). In total, 394,483 individuals were recorded representing 343 species. Among this year's 172 sites, 66 were located in Important Bird and Biodiversity Areas (IBAs).

The site with the highest number of species recorded was Fenglin Township (鳳林), Hualien County (125 species). It was followed by Tianliaoyang Wetland (田寮洋), New Taipei City (113 species), Cihu (慈湖), Kinmen County (106 species), Nan'ao Township (南澳), Yilan County (105 species), Longluan Lake (龍鑾潭), Pingtung County (103 species), and Jinsha Township (金沙), Kinmen County (101 species).

The site with the most individuals recorded was the southern bank of the Jhuoshui River Estuary (濁水溪口南岸), Changhua County (28,080 individuals). It was followed by Budai Salt Pan Wetland (布袋), Chiayi County (24,673 individuals), the Puzi River Estuary (朴子溪口), Chiayi County (15,582 individuals), Cihu (慈湖), Kinmen County (12,329 individuals), Xiangshan Wetland (香山濕地), Hsinchu City (10,352 individuals), and Aogu Wetland (鰲鼓), Chiayi County (10,295 individuals).

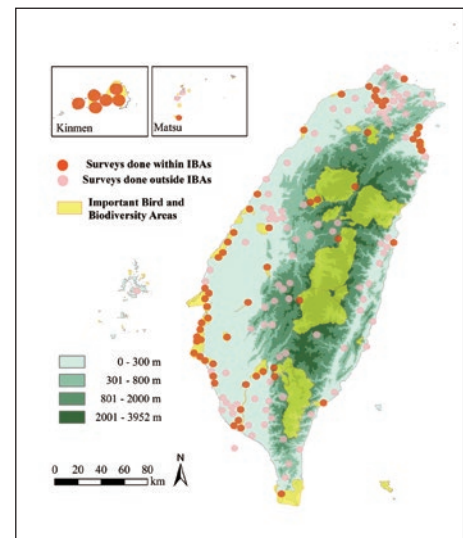


Fig. 1. NYBC 2024 site map highlighting surveys done in IBAs. Red circles indicate that survey circles were completely inside of or overlapped with IBAs. Pink circles indicate that survey circles were located completely outside of IBAs (credit: Tsai Chih-yi).

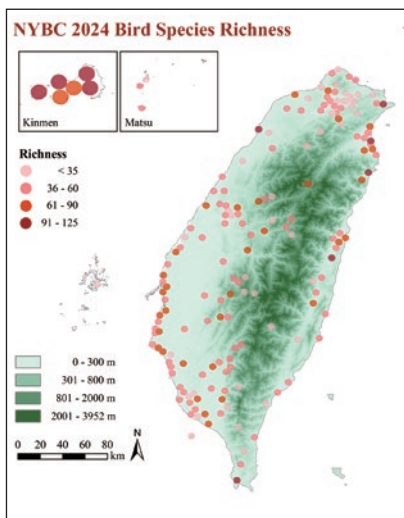


Fig 2. NYBC 2024 Bird Species Richness (credit: Chi Po-wei)

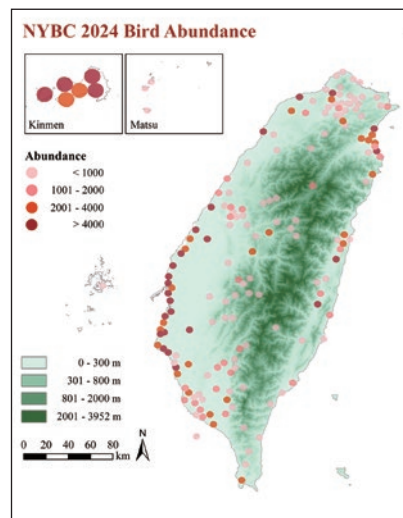


Fig 3. NYBC 2024 Bird Abundance (credit: Chi Po-wei)

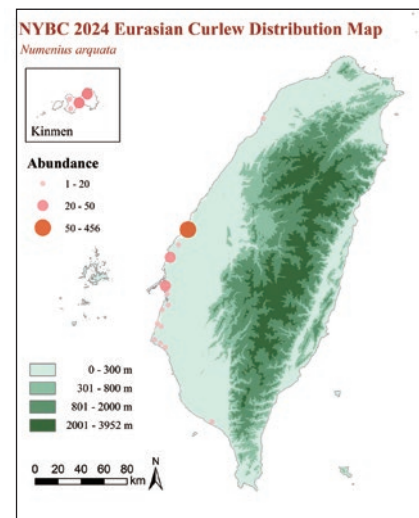


Fig 4. NYBC 2024 Distribution map for this year's mascot, the Eurasian Curlew (*Numenius arquata*) (credit: Chi Po-wei)

Table1. Site-Based Results for the Taiwan NYBC 2020-2024

Site Name	Number of Species					Number of Individuals				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Taian Waterfall	27	27	27	34	24	127	128	355	253	183
Huajiang Bridge	34	43	45	40	42	401	351	374	627	385
ShihLin	42	44	42	41	50	1040	687	818	735	953
Wenshan Muzha	56	56	54	51	50	897	1478	1299	1240	582
Taipei Parks	44	48	38	45	32	1288	1148	723	637	436
Academia Sinica	30	36	33	36	32	363	307	438	417	437
Guandu Wetland	81	86	80	92	78	4293	5850	5533	3615	5199
Fuzhou Bridge	54	63	54	24	37	1145	1062	944	107	213
Gancheng Bridge	53	57	33	35	36	546	594	146	139	218
Zhonghe&Yonghe	48	50	58	51	45	1343	1739	1584	1566	1583
Xindian	51		35	43	46	870		559	365	594
Yehliu	30	28	34	39	37	183	145	198	200	228
Jinshan	65	66	52	75	60	486	817	305	534	951
WaTzuWei	25	43	35	35	33	591	1360	548	518	338
Tonghou	17	28	21	22	18	88	119	94	103	63
Xizhi	31	46	32	44	24	310	1115	238	560	303
Houtong	36	25	32	26	12	133	107	204	70	94
Pinglin		25	23	16	20		242	84	54	56
Guishan	80	76	73	83	84	1403	1749	2152	1422	2459
Neidong	34	36				290	308			
Shiding	40	36	39	44	33	488	342	447	333	555
TienLiaoYang	140	142	116	136	113	3216	2701	1729	2141	1883
Manyueyuan	27					190				
Sanzhi	47	63	54	66	47	648	377	460	686	468
HsuTsu Kang	81	77	67	71	71	3549	1702	1956	2932	4099
Guoling Forest Park				55	54				3262	2147
HsianShen Wetland	85	89	14	111	95	8187	5737	12229	9446	10352
National Tsing Hua University	18	26	20	27	24	270	331	208	331	154
Sanhudao	26	34	26	25	16	645	375	430	275	344
Mingfong Historic Trail	33	27	29	20		335	217	152	86	
Dasyueshan9-23K	53	39	56	49	64	359	322	664	388	550
Dasyueshan23-37K	40	30	42	39	39	622	159	445	432	337
Dasyueshan37-52K	28	23	29	20	28	313	144	135	87	182
KaoMei Wetland	79	84	75	68	46	3502	7623	5172	2423	1638
Taichung Metropolitan Park	46	45	36	53	40	586	381	371	395	498
Dakeng	66	66	69	75	70	1392	1647	2246	1940	1782
National Museum of Natural Science	19	29	23	25	24	103	181	177	354	203
National Chung Hsing University	14	23	15	22	18	119	398	229	229	799
DaJia			40	46	46			796	878	1343
TaTu Stream	37	30	40	31	67	1248	2347	771	244	6980
Fazi River	36	36	54			787	602	173		
TaLi Stream	38	37				1057	1163			
Taiping	50	51	37	51	37	838	920	525	839	487



Site Name	Number of Species					Number of Individuals				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Basianshan	39	37				265	267			
Wuling Farm	49	62	52	60	62	1258	1970	1591	1305	1379
Puli	65	66	76	68	78	1894	1728	248	3898	2052
Wushe	43	45	62	66	55	732	629	744	864	732
Mei Feng Farm			37	39	43			261	382	508
Kunyang	18	18	18	18		121	131	193	94	
Aowanda		55	61	57	28		430	502	841	246
Jiji	82	85	91	92	86	1479	2850	2182	3326	2873
Huisun Forest Area	27	30	37	39	30	203	472	460	284	185
Tataka	34	27	23	30	22	637	295	369	753	429
HanPao & FuPao Wetland	37	37	46	59	48	7294	1620	8311	4555	6537
FangYuan	39	44	38	40	35	4518	4019	3807	4560	2635
DongLuoHsi River	46	53	52	49	48	3611	3461	4251	4429	4149
Yiwu Wetland	67	71	65	59	61	5305	4617	3921	3041	2248
Huben	68	74	67	55	57	1346	1357	786	691	587
Douliu		38					1711			
Shibi	63	57	50	52	49	940	633	818	578	1011
Fengshan		40	47	51	51		379	356	455	476
Chashan		25	45	51	39		326	427	449	380
Lantan Reservoir		39	50	50	42		578	1030	925	709
PuTai	79	76	76	78	76	34814	27556	28101	35844	24673
Zengwen Reservoir	55	62	64	67	64	686	802	875	1113	816
Alishan	30	30	29	35	32	412	361	520	604	752
Aogu Wetland	90	95	79	89	86	11372	8635	12882	6540	10295
Guanghua	54	41	57	65	62	910	554	853	956	790
SzuTsao	73	74	78	96	83	10661	10175	7439	6894	8219
Tainan Tucheng	69	71	73	86	75	5969	7146	5970	8539	5811
GuanTien	59	51	63	66	56	7875	1520	7846	5727	4563
Kantou Mountain	45	34	29	48	39	429	187	247	428	457
Qigu	64	62	69	64	60	3003	3773	3755	3280	2479
ChikuDingshan	40	49	49	72	70	2659	16457	1259	9073	7492
National Cheng Kung University	17	39		27	26	322	1585		654	565
Xinhua	21	48				162	522			
YungAn	49	43	46	60	59	4717	2313	3921	2446	2995
Shanping	27	34	38	51	38	352	270	444	766	408
Maolin	39	43	48	54	47	914	1009	635	752	793
Yellow Butterfly Valley	52	45	43	55	48	525	790	922	774	1171
Zuoying	65	43	72	67	60	3137	867	264	2977	2894
Cijin,Gushan&Yancheng	36	51	50	49	56	526	1329	1297	1615	1886
Weiwuying	30	32	38	39	38	507	791	1119	1169	1418
NiaoSung	35	33	38	37	35	399	827	659	604	674
Kaohsiung Old Railway Bridge Wetland	49	48	46	53	65	1371	1309	1469	1195	814
FengShan Reservoir	52	45	45	52	45	2350	1841	2434	1904	1192

Site Name	Number of Species					Number of Individuals				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Nanxing&Fengshan	48	53	54	51	58	970	1008	958	761	900
LinYuan	37	31	33	42	34	2152	985	1009	2429	1446
Erjituanshan	26	54	66	57	41	353	664	1583	1089	1018
Zhongliaoshan	45	50	43	19	45	729	504	444	242	602
YuanChungKang	52	48	36	56	50	2540	1416	788	1289	1907
Qieding	69	81	81	79	60	14450	6116	1437	13297	6826
Dongsha Islands	27					281				
Shihshan Forest Road	38	35	37	39	36	365	439	337	348	265
Wutai	15	29	27	28	31	72	195	146	181	293
Sandimen	43	48	35	42	38	447	708	559	758	868
National Pingtung University of Science and Technology	84	85	78	83	87	2136	2798	323	2591	2519
Linhoulin Forest Park	46	46	43	49	55	834	757	471	848	1111
Kanding Wetland	59	54	63	68	65	1781	1193	1558	3067	2373
DaPengWan	75	70	77	69	74	3802	2982	2643	2428	2569
DahanShan	19	21	18	32	26	102	102	85	262	152
Shuangliou Forest Recreation Area	35	17		34	35	145	63		182	213
LungLuan Lake	122	92	119	113	103	3824	3986	4396	4855	3876
Mudan	53	56	51	60	56	921	1284	915	1709	827
Pingtung Agricultural Biotechnology Park	64	56	60	62	58	1735	1433	1979	2238	1434
Weiliaoshan	50	40	50	51	52	599	775	546	665	1005
Taiwu	38	43	32	52	33	379	466	344	676	663
YiChiLine	31	30	31	30	37	2487	1816	2235	1946	2059
Zhu'an	65	54	74	84	82	2835	4255	4334	7658	9597
Yuanshan	32	35	31	31	42	2018	3992	2637	1347	3298
ShinnanMeifu	40	39	45	56	52	719	3345	1456	4498	3964
LanYang Stream	52	72	71	86	93	1411	1967	2431	3484	2212
Dazhou	44	38	40	33		782	884	902	344	
LiTse	75	70	75	83	72	5991	3336	6191	8825	7813
WuWeiKang	56	47	44	44	45	809	816	1108	796	1239
Nan'ao	114	104	12	111	105	2345	2499	2212	2551	2360
HuaLien River Mouth	46	38	42	48	64	690	332	701	580	531
SanMin	80	77	79	73	67	5488	6181	781	3420	4769
Ruisui	14	25			49	147	402			1375
JiAn	56	61	57	62	58	1370	1756	2234	1279	3387
PeiNan Wetland	52	40	38	61	55	736	301	586	1500	1025
Jhihben Wetland	57	53	56	71	45	2675	3358	2361	1483	476
Da Po Pond	69	41	37	62	25	2503	582	493	1511	280
Southern CrossIsland Provincial Highway	55	44	52	44	19	532	684	411	758	144
Taitung Yima Forest Road	33	21	32	47	22	130	97	165	354	153
Sanxiantai	31	29	29	40	36	271	269	158	470	330
TsaiYuan Wetland	30	46	42		20	114	388	347		122
Chi Lake	96	98	92	107	106	5922	17414	8129	16900	12329
Little Kinmen	91	88	85	114	98	3423	4672	4554	5316	5557
Kinsa	90	75	76	98	101	5938	3202	2296	4670	6256



Site Name	Number of Species					Number of Individuals				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Kinmen County Forestry Affair Place	83	84	63	93	98	2978	5802	1224	4133	5852
Beigan	15	12		17	28	76	107		126	610
Nangan	31	30		33	37	337	311		219	511
Juguang	23	20		31	48	208	205		135	921
Dongyin	48			55		387			560	
Shihmen	15					33				
Wuzhishan Range	40	53	26	52	32	1434	584	88	1015	180
ChiTou	16	22	14			369	246	165		
Kanggaokeng River	11	12	16	14	13	69	30	36	83	55
Jincheng	98	88	83	101	81	3928	2485	2469	3324	3015
Chonlin	87	84	71	81	77	2424	1977	1627	2137	3389
Meinong	49	49	60	75	70	683	2514	1396	1979	1991
Tonglin	54	51	51	51	47	670	755	463	423	477
Shenmei Lake	50	53	62	71	71	446	359	2197	816	928
Yulao	27	30	25	28	22	268	274	249	194	160
Yangchoukeng	27	32	29	27	34	247	427	326	281	520
Zhongli	53		55	58	51	949		375	689	1143
Ta Cheng	62	53	49	50	47	3972	4310	29	2221	2733
Zhongzhengshan	11	21	28	24	20	26	141	256	230	269
Dongshan	46	73	54	51	68	370	896	517	295	646
Waipu Lotus Valley	52	46	48	47	45	1420	965	929	1945	982
Dingzilanshi	43	40	30	47	55	189	217	224	210	391
Chukou	50	52	52	62	54	864	732	668	984	667
Jiufenershan	60	52	58	60	58	577	929	833	746	952
Zhuoshui River	60	57	67	58	84	10437	12912	16142	8144	28080
Pozhih Stream	58	62	66	58	54	6340	10666	14692	13389	15582
BaChangHsi River	37			81	65	415			4648	5481
Beimen	40		61	60	60	794		7678	1016	3329
ShouFeng	44	45	38	56	44	921	1923	2407	2062	1311
LiYuTan	53	48	49	26	43	305	349	310	118	462
Danongdafa Forest Park	44	53	28		43	325	266	199		387
Shalun Farm	60	68	64	68	69	2926	2516	2574	2639	3230
Keelung River			41					1572		
Erchong Floodway	60	47	58	55	58	1533	1594	1987	1526	2167
Tunghai University	43	34	39	28		747	819	549	473	
Nantun	40	29	30	39	42	1045	331	152	1252	1310
Dawu	50	54	55	44	47	541	505	707	902	580
TaiXi	46	39	44	42	40	5253	3109	6059	5224	4497
Sihu	24		60	65	68	115		3972	4019	5593
Kouhu	36		60	61	54	595		4152	4756	5068
Fonglin	110	118	109	122	125	3809	3649	5814	8295	10019
National Dong Hwa University	81	69	58	54	87	1862	1403	2429	1863	3347
Lao Mei	11	25	6	5	11	36	120	11	14	26
Walami Trail	31	24	46			303	224	499		
Meishan Entrance(Meishan Lane)	47	61	49			455	894	874		

Site Name	Number of Species					Number of Individuals				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Sishu	52	59	63	59	39	1837	2443	439	2805	713
Yunei River	28	31	27	38	23	190	161	142	199	119
Nangang	19	13	11	4	14	44	33	31	9	78
Shakadang	20	26	8			82	135	27		
Yushan Scenic Highway	20	22	19			196	281	5		
Lion's Head Mountain	41	36	36	40	36	260	257	129	275	341
Simahsian Forest Trail	56					1152				
Ligavon	34					235				
Jiali Mountain	22					122				
Smangus	21					123				
Zhonggang River	51					2178				
Ōita City	28					237				
Changbin		46	52	61	56		853	171	950	1627
Kaoshuing Central Park		52	54	64	57		1340	156	1714	1671
East Branch of Dalu Forest Trail		37					576			
Siyuan Pass		37					345			
Zhongzhiguan		43	41				747	135		
Nanshan Village		24					247			
Dianpu Mountain					22					280
Xiaoliuqiu					22					745
Qigu Fan-shaped Salt Field					54					2005
Qigu Taichu Salt Field					52					8610
Erbazi Botanical Garden					27					221
Wujie Xiaxiaowei					40					1778
Xiwei Bridge					38					417
Sun Link Sea Forest Recreation Area					28					209
Fuyuan Forest Recreation Area					22					226





Species Numbers and Population Trends

Chi Po-wei, Tsai Chih-yi

In 2024, 394,483 individuals from 343 species were recorded. This includes 700 Eurasian Curlew (*Numenius arquata*), this year's mascot species.

To assess population trends for common wintering waterbirds and landbirds in Taiwan, we analyzed 11 years of survey data from the Taiwan New Year Bird Count (2014–2024). For waterbirds, analysis was done for Taiwan proper (excluding offshore islands), and four areas considered migratory bird hotspots: (1) the Changhua Coast, (2) the Yilan Plain, (3) the Chianan Coast, and (4) the Kinmen Islands. We used the R package "Poptrend" (Knape 2016) to conduct generalized additive mixed model (GAMM) analyses. The figures shown represent the rate of change in abundance for each species. Red upward triangles indicate statistically significant increases, blue downward triangles indicate significant decreases, and grey circles indicate no statistically significant trend. Species not listed lacked sufficient data for analysis.

Regional Trends

With the addition of this year's data, overall waterbird trends on Taiwan proper remain similar to last year: Eurasian Teal (*Anas crecca*), Common Moorhen (*Gallinula chloropus*), Eurasian Curlew (*Numenius arquata*), and Common Greenshank (*Tringa nebularia*) all continue to show significant declines. Meanwhile, Great Cormorant (*Phalacrocorax carbo*)—which many people have noticed increasing—indeed shows a consistent, significant upward trend.

For the Yilan Plain, which supports high waterbird diversity, Red-necked Stint (*Calidris ruficollis*) and Pacific Golden-Plover (*Pluvialis fulva*) once again showed significant declines. Continued loss of rice paddy habitats remains a major threat to waterbirds in the area. On the Changhua Coast, Eurasian Curlew numbers continue to show a downward trend. Conversely, the Chianan Coast saw several species with significant increases, including Kentish Plover (*Charadrius alexandrinus*) and Dunlin (*Calidris alpina*), both of which have shown declining numbers in the Yilan Plain.

Waterbird trends for Kinmen showed some differences from last year, with only Northern Pintail (*Anas acuta*) showing a significant decline in numbers, while several other species showed significant increases. We hope continued data collection will further clarify these trends. Each hotspot faces different threats and conservation challenges, making it essential to continue monitoring and supporting waterbird populations across all areas.

In addition to continuing to track wintering waterbird trends, this year's report marks the first time we are also presenting results for common wintering landbirds!

To assess landbird population trends, analysis was done for Taiwan proper (excluding offshore islands), and four regions: (1) Northern Taiwan (including Taipei, New Taipei, Keelung City, Yilan County, Taoyuan City, Hsinchu County, and Miaoli County), (2) Western Taiwan (including Taichung City, Changhua County, Nantou County, and Yunlin County), (3) Southwestern Taiwan (including Chiayi County, Tainan City, Kaohsiung City, and Pingtung County), and (4) Eastern Taiwan (including Hualien County and Taitung County). Next, the same statistical approach used for waterbirds was applied.

Over the past 11 years, Red-throated Pipit (*Anthus cervinus*) and Eyebrowed Thrush (*Turdus obscurus*) have shown significant declines on Taiwan proper, while Arctic Warbler (*Phylloscopus borealis*), White-shouldered Starling (*Sturnia sinensis*), and Black-faced Bunting (*Emberiza spodocephala*) have shown significant increases.

Regionally, species with significant declines in Northern, Southwestern, and Eastern Taiwan were often farmland or open-country species. In contrast, many of the significantly declining species in Western Taiwan were forest birds. Research on East Asian migratory landbirds remains limited, and identifying the key factors driving these population changes will be an important area for future study.



**Table 2. 2020-2024 NYBC Data by Species**

Scientific Name	English Common Name	2020	2021	2022	2023	2024
<i>Anser anser</i>	Graylag Goose	0	0	0	0	3
<i>Anser cygnoides</i>	Swan Goose	0	0	1	0	8
<i>Anser albifrons</i>	Greater White-fronted Goose	1	7	2	60	7
<i>Anser fabalis</i>	Taiga Bean-Goose	0	9	0	15	10
<i>Anser serrirostris</i>	Tundra Bean-Goose	7	18	17	5	35
<i>Tadorna tadorna</i>	Common Shelduck	7	3	4	16	27
<i>Nettapus coromandelianus</i>	Cotton Pygmy-Goose	1	0	0	1	0
<i>Aix galericulata</i>	Mandarin Duck	6	7	0	12	5
<i>Sibirionetta formosa</i>	Baikal Teal	1	0	0	1	2
<i>Spatula querquedula</i>	Garganey	31	30	28	20	17
<i>Spatula clypeata</i>	Northern Shoveler	13766	11728	11400	11192	8661
<i>Mareca strepera</i>	Gadwall	56	135	76	202	84
<i>Mareca falcata</i>	Falcated Duck	69	52	24	41	121
<i>Mareca penelope</i>	Eurasian Wigeon	10035	13858	7755	9752	9176
<i>Mareca americana</i>	American Wigeon	1	0	0	0	1
<i>Anas zonorhyncha</i>	Eastern Spot-billed Duck	3538	3540	3665	4429	4362
<i>Anas platyrhynchos</i>	Mallard	92	117	156	264	211
<i>Anas acuta</i>	Northern Pintail	3566	4522	4033	9524	4683
<i>Anas crecca</i>	Green-winged Teal	6712	7516	6277	6911	7569
<i>Aythya ferina</i>	Common Pochard	122	26	65	128	39
<i>Aythya nyroca</i>	Ferruginous Duck	0	4	19	12	12
<i>Aythya fuligula</i>	Tufted Duck	3346	3233	3730	4275	3271
<i>Aythya marila</i>	Greater Scaup	33	21	8	18	3
<i>Bucephala clangula</i>	Common Goldeneye	0	0	0	0	1
<i>Mergellus albellus</i>	Smew	1	0	0	1	1
<i>Arborophila crudigularis</i>	Taiwan Partridge	92	89	114	106	109
<i>Syrnaticus mikado</i>	Mikado Pheasant	0	1	4	1	5
<i>Phasianus colchicus</i>	Ring-necked Pheasant	195	115	164	163	166
<i>Lophura swinhoii</i>	Swinhoe's Pheasant	19	12	16	34	18
<i>Pavo cristatus</i>	Indian Peafowl	9	25	82	48	60
<i>Bambusicola sonorivox</i>	Taiwan Bamboo-Partridge	229	233	284	345	295
<i>Coturnix japonica</i>	Japanese Quail	4	0	1	1	23
<i>Tachybaptus ruficollis</i>	Little Grebe	1417	1159	1475	1941	1603
<i>Podiceps cristatus</i>	Great Crested Grebe	178	123	120	83	68
<i>Podiceps nigricollis</i>	Eared Grebe	19	19	2	9	7
<i>Columba livia</i>	Rock Pigeon	5265	8085	9332	8914	8964
<i>Columba pulchricollis</i>	Ashy Wood-Pigeon	455	378	120	341	390
<i>Streptopelia orientalis</i>	Oriental Turtle-Dove	870	745	809	1878	1034
<i>Streptopelia tranquebarica</i>	Red Collared-Dove	9462	9296	11465	11624	14520
<i>Spilopelia chinensis</i>	Spotted Dove	3699	3358	3099	4316	4234
<i>Chalcophaps indica</i>	Asian Emerald Dove	34	26	39	42	52
<i>Geopelia striata</i>	Zebra Dove	21	26	55	45	70
<i>Treron sieboldii</i>	White-bellied Green-Pigeon	102	174	175	169	204
<i>Treron formosae</i>	Whistling Green-Pigeon	91	21	138	41	91
<i>Centropus sinensis</i>	Greater Coucal	36	37	32	68	70
<i>Centropus bengalensis</i>	Lesser Coucal	23	17	23	19	15
<i>Cacomantis merulinus</i>	Plaintive Cuckoo	0	0	0	0	1

Scientific Name	English Common Name	2020	2021	2022	2023	2024
<i>Caprimulgus affinis</i>	Savanna Nightjar	588	25	56	37	45
<i>Hirundapus caudacutus</i>	White-throated Needletail	0	0	0	0	1
<i>Apus pacificus</i>	Pacific Swift	3	5	4	5	0
<i>Apus nipalensis</i>	House Swift	1520	3076	3297	2653	2518
<i>Rallus indicus</i>	Brown-cheeked Rail	2	2	0	0	1
<i>Lewinia striata</i>	Slaty-breasted Rail	1	1	1	4	5
<i>Gallinula chloropus</i>	Eurasian Moorhen	3905	3328	3642	3838	3668
<i>Fulica atra</i>	Eurasian Coot	1186	1589	2391	2646	2163
<i>Amaurornis phoenicurus</i>	White-breasted Waterhen	310	248	247	390	440
<i>Zapornia fusca</i>	Ruddy-breasted Crane	13	22	15	15	12
<i>Zapornia pusilla</i>	Baillon's Crane	1	0	0	1	0
<i>Himantopus himantopus</i>	Black-winged Stilt	14869	11337	13924	14193	18411
<i>Recurvirostra avosetta</i>	Pied Avocet	4609	4337	6072	7280	5918
<i>Haematopus ostralegus</i>	Eurasian Oystercatcher	212	123	7	33	139
<i>Pluvialis squatarola</i>	Black-bellied Plover	1015	1411	1336	1812	1959
<i>Pluvialis fulva</i>	Pacific Golden-Plover	7293	5476	3652	4710	5260
<i>Vanellus vanellus</i>	Northern Lapwing	177	207	455	1085	703
<i>Charadrius mongolus</i>	Lesser Sand-Plover	225	208	664	269	136
<i>Charadrius leschenaultii</i>	Greater Sand-Plover	499	262	870	147	124
<i>Charadrius alexandrinus</i>	Kentish Plover	15753	23376	29957	20126	24027
<i>Charadrius hiaticula</i>	Common Ringed Plover	0	0	1	1	0
<i>Charadrius placidus</i>	Long-billed Plover	8	2	3	1	1
<i>Charadrius dubius</i>	Little Ringed Plover	1578	1312	1895	1984	1894
<i>Rostratula benghalensis</i>	Greater Painted-Snipe	70	64	69	85	95
<i>Hydrophasianus chirurgus</i>	Pheasant-tailed Jacana	281	143	462	455	300
<i>Numenius phaeopus</i>	Whimbrel	220	188	104	66	201
<i>Numenius madagascariensis</i>	Far Eastern Curlew	2	2	3	3	3
<i>Numenius arquata</i>	Eurasian Curlew	877	776	749	206	700
<i>Limosa lapponica</i>	Bar-tailed Godwit	15	55	11	40	17
<i>Limosa limosa</i>	Black-tailed Godwit	7	3	103	6	49
<i>Arenaria interpres</i>	Ruddy Turnstone	1968	726	1033	669	1253
<i>Calidris tenuirostris</i>	Great Knot	9	19	76	81	93
<i>Calidris canutus</i>	Red Knot	2	2	0	91	37
<i>Calidris pugnax</i>	Ruff	9	1	7	7	0
<i>Calidris falcinellus</i>	Broad-billed Sandpiper	4	0	1	11	8
<i>Calidris acuminata</i>	Sharp-tailed Sandpiper	0	0	2	0	17
<i>Calidris ferruginea</i>	Curlew Sandpiper	22	2	1	3	4
<i>Calidris temminckii</i>	Temminck's Stint	10	6	10	9	3
<i>Calidris subminuta</i>	Long-toed Stint	599	252	637	625	421
<i>Calidris pygmaea</i>	Spoon-billed Sandpiper	0	0	0	0	1
<i>Calidris ruficollis</i>	Red-necked Stint	1010	1534	1189	1176	2093
<i>Calidris alba</i>	Sanderling	256	182	210	232	428
<i>Calidris alpina</i>	Dunlin	12906	16835	26128	23541	24003
<i>Calidris minuta</i>	Little Stint	5	0	0	1	0
<i>Scolopax rusticola</i>	Eurasian Woodcock	6	6	8	7	2
<i>Gallinago gallinago</i>	Common Snipe	579	430	453	614	751
<i>Gallinago stenura</i>	Pin-tailed Snipe	2	0	0	0	1
<i>Xenus cinereus</i>	Terek Sandpiper	2	4	19	7	26
<i>Actitis hypoleucos</i>	Common Sandpiper	466	534	511	590	567





Scientific Name	English Common Name	2020	2021	2022	2023	2024
<i>Tringa ochropus</i>	Green Sandpiper	123	112	98	148	149
<i>Tringa brevipes</i>	Gray-tailed Tattler	33	0	7	7	2
<i>Tringa erythropus</i>	Spotted Redshank	7	3	2	25	15
<i>Tringa nebularia</i>	Common Greenshank	2331	1572	1714	1422	1857
<i>Tringa stagnatilis</i>	Marsh Sandpiper	518	584	680	484	975
<i>Tringa glareola</i>	Wood Sandpiper	1511	1258	1533	1802	2672
<i>Tringa totanus</i>	Common Redshank	481	356	556	761	965
<i>Turnix suscitator</i>	Barred Buttonquail	5	6	47	32	12
<i>Glareola maldivarum</i>	Oriental Pratincole	0	0	52	1	1
<i>Saundersilarus saundersi</i>	Saunders's Gull	9	184	188	143	94
<i>Chroicocephalus ridibundus</i>	Black-headed Gull	5794	6124	6997	6741	5872
<i>Larus crassirostris</i>	Black-tailed Gull	3	7	3	51	34
<i>Larus canus</i>	Common Gull	0	0	0	0	1
<i>Larus argentatus</i>	Herring Gull	86	59	63	107	56
<i>Larus fuscus</i>	Lesser Black-backed Gull	4	2	1	4	16
<i>Larus schistisagus</i>	Slaty-backed Gull	0	0	0	2	0
<i>Sternula albifrons</i>	Little Tern	58	40	97	48	13
<i>Gelochelidon nilotica</i>	Gull-billed Tern	3	13	68	9	2
<i>Hydroprogne caspia</i>	Caspian Tern	1250	2369	3267	2747	1872
<i>Chlidonias leucopterus</i>	White-winged Tern	3	0	0	1	26
<i>Chlidonias hybrida</i>	Whiskered Tern	8597	3521	9762	11081	9990
<i>Ciconia boyciana</i>	Oriental Stork	3	7	22	2	6
<i>Phalacrocorax carbo</i>	Great Cormorant	9960	16306	15273	20715	17534
<i>Phalacrocorax capillatus</i>	Japanese Cormorant	22	0	0	8	14
<i>Botaurus stellaris</i>	Great Bittern	1	1	5	0	3
<i>Ixobrychus sinensis</i>	Yellow Bittern	103	115	134	101	69
<i>Ixobrychus cinnamomeus</i>	Cinnamon Bittern	29	19	17	26	18
<i>Ardea cinerea</i>	Gray Heron	5124	4899	4692	4849	5125
<i>Ardea purpurea</i>	Purple Heron	30	22	25	38	38
<i>Ardea alba</i>	Great Egret	5790	4867	6163	6353	7365
<i>Ardea intermedia</i>	Intermediate Egret	456	318	352	409	311
<i>Egretta eulophotes</i>	Chinese Egret	1	0	0	0	1
<i>Egretta garzetta</i>	Little Egret	8772	7229	8768	9318	8637
<i>Egretta sacra</i>	Pacific Reef-Heron	14	17	11	15	9
<i>Bubulcus ibis</i>	Cattle Egret	4022	5534	4126	4395	4437
<i>Ardeola bacchus</i>	Chinese Pond-Heron	61	52	50	31	61
<i>Butorides striata</i>	Striated Heron	29	23	116	29	34
<i>Nycticorax nycticorax</i>	Black-crowned Night-Heron	2075	2001	2449	2652	2382
<i>Gorsachius melanolophus</i>	Malayan Night-Heron	78	91	92	155	106
<i>Threskiornis aethiopicus</i>	African Sacred Ibis	1723	456	109	45	8
<i>Platalea leucorodia</i>	Eurasian Spoonbill	31	24	53	125	87
<i>Platalea minor</i>	Black-faced Spoonbill	2193	1470	2409	2736	2274
<i>Pandion haliaetus</i>	Osprey	233	212	228	236	275
<i>Elanus caeruleus</i>	Black-winged Kite	187	180	188	179	236
<i>Pernis ptilorhynchus</i>	Oriental Honey-buzzard	63	83	101	87	69
<i>Spilornis cheela</i>	Crested Serpent-Eagle	265	293	289	259	254
<i>Nisaetus nipalensis</i>	Mountain Hawk-Eagle	5	17	15	7	10
<i>Ictinaetus malaiensis</i>	Black Eagle	35	42	53	44	36
<i>Butastur indicus</i>	Gray-faced Buzzard	4	7	3	3	4

Scientific Name	English Common Name	2020	2021	2022	2023	2024
<i>Circus spilonotus</i>	Eastern Marsh-Harrier	14	19	17	21	32
<i>Circus cyaneus</i>	Hen Harrier	1	5	0	2	8
<i>Circus melanoleucos</i>	Pied Harrier	1	0	1	0	1
<i>Accipiter trivirgatus</i>	Crested Goshawk	126	129	119	130	109
<i>Accipiter gularis</i>	Japanese Sparrowhawk	4	4	2	3	7
<i>Accipiter virgatus</i>	Besra	31	30	29	39	29
<i>Accipiter nisus</i>	Eurasian Sparrowhawk	3	4	5	7	9
<i>Accipiter gentilis</i>	Northern Goshawk	2	2	0	1	6
<i>Milvus migrans</i>	Black Kite	334	251	400	336	380
<i>Buteo japonicus</i>	Eastern Buzzard	65	55	42	78	120
<i>Buteo hemilasius</i>	Upland Buzzard	0	0	0	1	3
<i>Otus spilocephalus</i>	Mountain Scops-Owl	41	11	25	14	16
<i>Otus lettia</i>	Collared Scops-Owl	26	10	318	10	14
<i>Taeniopteryx brodiei</i>	Collared Owlet	4	3	5	3	3
<i>Ninox japonica</i>	Northern Boobook	2	1	1	3	1
<i>Upupa epops</i>	Eurasian Hoopoe	95	54	54	169	213
<i>Alcedo atthis</i>	Common Kingfisher	439	449	471	500	473
<i>Halcyon smyrnensis</i>	White-throated Kingfisher	50	33	31	14	52
<i>Ceryle rudis</i>	Pied Kingfisher	34	23	14	23	37
<i>Psilopogon nuchalis</i>	Taiwan Barbet	786	822	782	1002	872
<i>Jynx torquilla</i>	Eurasian Wryneck	3	9	3	3	6
<i>Yungipicus canicapillus</i>	Gray-capped Pygmy Woodpecker	292	285	321	296	283
<i>Dendrocopos leucotos</i>	White-backed Woodpecker	9	15	12	7	11
<i>Picus canus</i>	Gray-headed Woodpecker	4	4	10	5	5
<i>Falco tinnunculus</i>	Eurasian Kestrel	97	108	98	130	160
<i>Falco columbarius</i>	Merlin	0	0	0	0	1
<i>Falco subbuteo</i>	Eurasian Hobby	0	2	1	1	1
<i>Falco peregrinus</i>	Peregrine Falcon	41	45	41	41	53
<i>Pericrocotus solaris</i>	Gray-chinned Minivet	505	504	803	669	465
<i>Pericrocotus speciosus</i>	Scarlet Minivet	2	0	0	39	0
<i>Pericrocotus divaricatus</i>	Ashy Minivet	33	2	3	39	3
<i>Coracina macei</i>	Large Cuckooshrike	6	2	5	6	8
<i>Lalage melaschistos</i>	Black-winged Cuckooshrike	1	4	8	7	8
<i>Erpornis zantholeuca</i>	White-bellied Erpornis	324	410	464	339	396
<i>Oriolus chinensis</i>	Black-naped Oriole	19	26	24	25	42
<i>Oriolus traillii</i>	Maroon Oriole	74	72	60	84	90
<i>Dicrurus macrocercus</i>	Black Drongo	1399	1415	1623	1737	1671
<i>Dicrurus leucophaeus</i>	Ashy Drongo	3	1	2	3	5
<i>Dicrurus aeneus</i>	Bronzed Drongo	302	302	394	289	324
<i>Dicrurus hottentottus</i>	Hair-crested Drongo	5	0	0	2	6
<i>Hypothymis azurea</i>	Black-naped Monarch	516	594	628	649	640
<i>Lanius bucephalus</i>	Bull-headed Shrike	1	0	1	2	0
<i>Lanius isabellinus</i>	Isabelline Shrike	0	0	0	0	1
<i>Lanius cristatus</i>	Brown Shrike	834	813	1285	753	675
<i>Lanius schach</i>	Long-tailed Shrike	334	311	342	349	377
<i>Garrulus glandarius</i>	Eurasian Jay	63	73	78	63	38
<i>Cyanopica cyanus</i>	Azure-winged Magpie	17	7	25	24	47
<i>Urocissa caerulea</i>	Taiwan Blue-Magpie	244	327	341	368	379
<i>Dendrocitta formosae</i>	Gray Treepie	1521	1395	1229	1751	1645



Scientific Name	English Common Name	2020	2021	2022	2023	2024
<i>Pica serica</i>	Oriental Magpie	1076	1181	1182	1155	1227
<i>Nucifraga caryocatactes</i>	Eurasian Nutcracker	25	15	21	29	24
<i>Corvus frugilegus</i>	Rook	1	1	1	9	0
<i>Corvus corone</i>	Carrion Crow	4	1	0	1	0
<i>Corvus macrorhynchos</i>	Large-billed Crow	486	267	374	373	355
<i>Corvus pectoralis</i>	Collared Crow	76	58	54	85	137
<i>Periparus ater</i>	Coal Tit	90	27	113	50	56
<i>Sittiparus castaneiventris</i>	Chestnut-bellied Tit	78	77	170	39	68
<i>Parus monticolus</i>	Green-backed Tit	292	370	364	260	266
<i>Machlolophus holsti</i>	Taiwan Yellow Tit	43	56	65	36	45
<i>Remiz consobrinus</i>	Chinese Penduline-Tit	0	8	0	10	1
<i>Alauda arvensis</i>	Eurasian Skylark	103	158	203	383	260
<i>Alauda gulgula</i>	Oriental Skylark	293	133	418	262	240
<i>Prinia striata</i>	Striped Prinia	6	0	6	2	7
<i>Prinia flaviventris</i>	Yellow-bellied Prinia	797	668	643	632	709
<i>Prinia inornata</i>	Plain Prinia	1617	1465	1577	1581	1769
<i>Cisticola juncidis</i>	Zitting Cisticola	50	34	57	36	93
<i>Cisticola exilis</i>	Golden-headed Cisticola	22	7	7	8	11
<i>Acrocephalus bistrigiceps</i>	Black-browed Reed Warbler	7	1	0	1	2
<i>Acrocephalus orientalis</i>	Oriental Reed Warbler	24	20	19	10	23
<i>Helopsaltes ochotensis</i>	Middendorff's Grasshopper Warbler	4	0	2	1	4
<i>Locustella alishanensis</i>	Taiwan Bush Warbler	0	2	0	2	4
<i>Locustella mandelli</i>	Russet Bush Warbler	1	0	0	1	0
<i>Pnoepyga formosana</i>	Taiwan Cupwing	18	10	18	17	21
<i>Riparia chinensis</i>	Gray-throated Martin	1562	1847	2025	1582	1807
<i>Riparia riparia</i>	Bank Swallow	3	7	10	5	4
<i>Hirundo rustica</i>	Barn Swallow	3889	2497	3005	2125	3611
<i>Hirundo tahitica</i>	Pacific Swallow	4136	3581	5274	3724	3461
<i>Cecropis daurica</i>	Red-rumped Swallow	8	24	61	71	65
<i>Cecropis striolata</i>	Striated Swallow	1970	2784	2681	2851	2615
<i>Delichon dasypus</i>	Asian House-Martin	331	989	676	679	471
<i>Spizixos semitorques</i>	Collared Finchbill	144	278	380	207	312
<i>Pycnonotus taivanus</i>	Styan's Bulbul	1650	1439	1601	2028	2226
<i>Pycnonotus sinensis</i>	Light-vented Bulbul	12007	10754	11474	12458	12224
<i>Pycnonotus aurigaster</i>	Sooty-headed Bulbul	3	1	0	1	2
<i>Hypsipetes leucocephalus</i>	Black Bulbul	5309	4749	4985	5423	6031
<i>Hypsipetes amaurotis</i>	Brown-eared Bulbul	15	2	5	1	3
<i>Hemixos castanonotus</i>	Chestnut Bulbul	1	1	6	43	9
<i>Phylloscopus inornatus</i>	Yellow-browed Warbler	101	119	94	179	275
<i>Phylloscopus proregulus</i>	Pallas's Leaf Warbler	29	12	10	190	27
<i>Phylloscopus fuscatus</i>	Dusky Warbler	133	139	138	117	205
<i>Phylloscopus trochiloides</i>	Greenish Warbler	0	0	0	0	1
<i>Phylloscopus borealis</i>	Arctic Warbler	248	267	299	241	349
<i>Phylloscopus goodsoni</i>	Hartert's Leaf Warbler	2	0	0	3	0
<i>Urosphena squameiceps</i>	Asian Stubtail	2	6	5	0	1
<i>Abroscopus albogularis</i>	Rufous-faced Warbler	395	410	488	448	328
<i>Horornis diphone</i>	Japanese Bush Warbler	8	9	1	2	3
<i>Horornis canturians</i>	Manchurian Bush Warbler	78	66	82	97	117
<i>Horornis fortipes</i>	Brownish-flanked Bush Warbler	18	26	23	25	35



Scientific Name	English Common Name	2020	2021	2022	2023	2024
<i>Horornis acanthizoides</i>	Yellowish-bellied Bush Warbler	43	39	29	20	16
<i>Aegithalos concinnus</i>	Black-throated Tit	686	785	1310	775	888
<i>Fulvetta formosana</i>	Taiwan Fulvetta	73	54	37	52	50
<i>Suthora verreauxi</i>	Golden Parrotbill	4	80	70	30	31
<i>Sinosuthora webbiana</i>	Vinous-throated Parrotbill	266	334	316	377	294
<i>Staphida torqueola</i>	Indochinese Yuhina	0	0	0	21	0
<i>Yuhina brunneiceps</i>	Taiwan Yuhina	1609	1524	2185	1370	1078
<i>Zosterops simplex</i>	Swinhoe's White-eye	7167	9121	8429	8678	10121
<i>Cyanoderma ruficeps</i>	Rufous-capped Babbler	877	825	818	820	705
<i>Pomatorhinus musicus</i>	Taiwan Scimitar-Babbler	882	976	1030	981	907
<i>Erythrogenys erythrocnemis</i>	Black-necklaced Scimitar-Babbler	222	169	200	207	201
<i>Schoeniparus brunneus</i>	Dusky Fulvetta	206	149	170	87	176
<i>Alcippe morrisonia</i>	Morrison's Fulvetta	2095	2038	2306	2288	2019
<i>Trochalopteron morrisonianum</i>	White-whiskered Laughingthrush	89	59	76	85	53
<i>Heterophasia auricularis</i>	White-eared Sibia	780	1021	997	1244	882
<i>Actinodura morrisoniana</i>	Taiwan Barwing	70	97	108	108	108
<i>Liocichla steerii</i>	Steere's Liocichla	258	251	254	318	353
<i>Garrulax canorus</i>	Chinese Hwamei	116	79	80	91	53
<i>Garrulax taewanus</i>	Taiwan Hwamei	36	62	53	64	55
<i>Pterorhinus chinensis</i>	Black-throated Laughingthrush	6	15	16	24	11
<i>Pterorhinus ruficeps</i>	Rufous-crowned Laughingthrush	6	1	120	5	156
<i>Pterorhinus poecilorhynchus</i>	Rusty Laughingthrush	24	10	51	36	36
<i>Regulus regulus</i>	Goldcrest	0	0	0	0	1
<i>Regulus goodfellowi</i>	Flamecrest	151	55	76	122	87
<i>Sitta europaea</i>	Eurasian Nuthatch	32	85	64	46	65
<i>Troglodytes troglodytes</i>	Eurasian Wren	11	6	5	1	1
<i>Cinclus pallasii</i>	Brown Dipper	19	31	22	16	22
<i>Aplonis panayensis</i>	Asian Glossy Starling	356	215	504	649	1269
<i>Sturnus vulgaris</i>	European Starling	15	0	0	22	37
<i>Gracupica nigricollis</i>	Black-collared Starling	531	699	715	722	812
<i>Sturnia sinensis</i>	White-shouldered Starling	484	256	583	267	420
<i>Sturnia malabarica</i>	Chestnut-tailed Starling	184	179	439	568	644
<i>Spodiopsar sericeus</i>	Red-billed Starling	375	123	168	1149	57
<i>Spodiopsar cineraceus</i>	White-cheeked Starling	21	61	58	135	51
<i>Acridotheres tristis</i>	Common Myna	2872	2927	3376	3244	3394
<i>Acridotheres javanicus</i>	Javan Myna	6337	7896	8287	6776	9249
<i>Acridotheres cristatellus formosanus</i>	Crested Myna (Taiwan)	419	359	522	386	427
<i>Acridotheres cristatellus cristatellus</i>	Crested Myna (Kinmen & Matsu)	4433	3792	3335	3425	4893
<i>Zoothera aurea</i>	White's Thrush	24	15	5	96	1
<i>Zoothera dauma</i>	Scaly Thrush	5	0	0	2	0
<i>Turdus mandarinus</i>	Chinese Blackbird	136	182	101	171	197
<i>Turdus niveiceps</i>	Taiwan Thrush	8	20	2	22	5
<i>Turdus cardis</i>	Japanese Thrush	0	0	1	7	3
<i>Turdus hortulorum</i>	Gray-backed Thrush	1	0	1	21	3
<i>Turdus obscurus</i>	Eyebrowed Thrush	7	7	8	60	6
<i>Turdus chrysolaus</i>	Brown-headed Thrush	550	552	421	936	295
<i>Turdus pallidus</i>	Pale Thrush	324	406	114	532	33
<i>Turdus eunomus</i>	Dusky Thrush	98	73	26	76	5
<i>Turdus naumanni</i>	Naumann's Thrush	3	3	6	22	2



Scientific Name	English Common Name	2020	2021	2022	2023	2024
<i>Muscicapa griseisticta</i>	Gray-streaked Flycatcher	2	1	0	1	1
<i>Muscicapa ferruginea</i>	Ferruginous Flycatcher	0	0	0	0	1
<i>Muscicapa dauurica</i>	Asian Brown Flycatcher	4	4	5	17	10
<i>Copsychus saularis</i>	Oriental Magpie-Robin	301	309	284	466	504
<i>Copsychus malabaricus</i>	White-rumped Shama	91	114	113	289	246
<i>Niltava vivida</i>	Taiwan Vivid Niltava	107	73	114	134	90
<i>Brachypteryx leucophris</i>	Lesser Shortwing	0	0	0	0	1
<i>Brachypteryx goodfellowi</i>	Taiwan Shortwing	9	7	2	8	8
<i>Larvivora akahige</i>	Japanese Robin	0	2	3	5	9
<i>Luscinia svecica</i>	Bluethroat	1	1	0	5	7
<i>Myophonus insularis</i>	Taiwan Whistling-Thrush	91	59	70	89	52
<i>Myophonus caeruleus</i>	Blue Whistling-Thrush	28	37	19	39	39
<i>Enicurus scouleri</i>	Little Forktail	12	11	4	4	7
<i>Calliope calliope</i>	Siberian Rubythroat	247	277	357	243	234
<i>Myiomela leucura</i>	White-tailed Robin	34	44	41	61	24
<i>Tarsiger cyanurus</i>	Red-flanked Bluetail	11	14	6	25	12
<i>Tarsiger formosanus</i>	Taiwan Bush-Robin	6	5	1	4	7
<i>Tarsiger johnstoniae</i>	Collared Bush-Robin	39	52	53	60	31
<i>Ficedula narcissina</i>	Narcissus Flycatcher	0	0	0	0	1
<i>Ficedula hyperythra</i>	Snowy-browed Flycatcher	11	15	96	16	14
<i>Ficedula albicilla</i>	Taiga Flycatcher	0	1	0	0	5
<i>Ficedula parva</i>	Red-breasted Flycatcher	4	3	2	3	0
<i>Phoenicurus fuliginosus</i>	Plumbeous Redstart	239	238	178	183	170
<i>Phoenicurus aureoreus</i>	Daurian Redstart	716	572	735	1098	313
<i>Monticola solitarius</i>	Blue Rock-Thrush	146	118	92	122	111
<i>Saxicola stejnegeri</i>	Amur Stonechat	34	41	28	18	111
<i>Dicaeum minullum</i>	Plain Flowerpecker	26	47	89	73	62
<i>Dicaeum ignipectus</i>	Fire-breasted Flowerpecker	54	87	81	62	78
<i>Aethopyga christinae</i>	Fork-tailed Sunbird	48	51	16	57	32
<i>Euodice malabarica</i>	Indian Silverbill	164	154	230	153	117
<i>Lonchura punctulata</i>	Scaly-breasted Munia	5579	4793	4443	4244	4051
<i>Lonchura striata</i>	White-rumped Munia	675	601	543	375	506
<i>Lonchura atricapilla</i>	Chestnut Munia	1215	677	1441	609	1319
<i>Estrilda melpoda</i>	Orange-cheeked Waxbill	0	21	31	4	43
<i>Prunella collaris</i>	Alpine Accentor	7	9	9	1	0
<i>Passer cinnamomeus</i>	Russet Sparrow	0	35	2	6	0
<i>Passer montanus</i>	Eurasian Tree Sparrow	30144	21741	26208	28420	32669
<i>Motacilla cinerea</i>	Gray Wagtail	613	584	701	669	654
<i>Motacilla tschutschensis</i>	Eastern Yellow Wagtail	1956	1542	2946	4380	2499
<i>Motacilla alba</i>	White Wagtail	1122	1483	1563	1275	1821
<i>Anthus richardi</i>	Richard's Pipit	238	316	275	147	237
<i>Anthus hodgsoni</i>	Olive-backed Pipit	394	321	332	460	243
<i>Anthus gustavi</i>	Pechora Pipit	1	0	0	0	1
<i>Anthus cervinus</i>	Red-throated Pipit	220	128	156	195	142
<i>Anthus rubescens</i>	American Pipit	10	30	7	25	27
<i>Fringilla montifringilla</i>	Brambling	2	103	52	33	33
<i>Eophona migratoria</i>	Yellow-billed Grosbeak	110	182	74	128	105
<i>Carpodacus formosanus</i>	Taiwan Rosefinch	5	13	3	6	3
<i>Pyrrhula nipalensis</i>	Brown Bullfinch	0	27	14	2	8



Scientific Name	English Common Name	2020	2021	2022	2023	2024
<i>Pyrrhula owstoni</i>	Taiwan Bullfinch	9	2	13	3	23
<i>Chloris sinica</i>	Oriental Greenfinch	117	180	35	116	68
<i>Spinus spinus</i>	Eurasian Siskin	123	298	4	82	90
<i>Emberiza fucata</i>	Chestnut-eared Bunting	5	1	0	1	1
<i>Emberiza elegans</i>	Yellow-throated Bunting	2	2	0	0	4
<i>Emberiza pallasii</i>	Pallas's Bunting	1	1	0	1	1
<i>Emberiza aureola</i>	Yellow-breasted Bunting	0	0	0	0	1
<i>Emberiza pusilla</i>	Little Bunting	20	9	61	107	23
<i>Emberiza rustica</i>	Rustic Bunting	1	1	0	2	1
<i>Emberiza sulphurata</i>	Yellow Bunting	0	1	0	0	4
<i>Emberiza spodocephala</i>	Black-faced Bunting	520	478	608	936	614
<i>Cacatua galerita</i>	Sulphur-crested Cockatoo	0	0	1	4	0
<i>Psittacula krameri</i>	Rose-ringed Parakeet	0	2	0	1	0
<i>Acridotheres leucocephalus</i>	Vinous-breasted Myna	2	4	2	17	17
<i>Ploceus cucullatus</i>	Village Weaver	0	0	0	0	1
<i>Cairina moschata</i> (Domestic type)	Muscovy Duck (Domestic type)	35	54	35	65	14
<i>Anas spp.</i>	Anas	1	6	0	2	8
<i>Anatidae</i>	Domestic Mallard	68	30	145	104	74
<i>Columbidae</i>	Columbidae	0	2	1	18	43
	Dark swiftlet	0	1	2	2	4
<i>Charadriidae</i>	Charadriidae	0	50	10	25	39
<i>Scolopacidae/Charadriidae</i>	Scolopacidae/Charadriidae	0	4000	0	10	199
<i>Calidris spp.</i>	Calidris	0	0	0	23	0
<i>Gallinago spp.</i>	Gallinago	0	18	21	10	1
<i>Laridae</i>	Laridae	2	0	0	3	1
<i>Larus spp.</i>	Larus	0	1	2	13	14
<i>Ardeidae</i>	Ardeidae	0	7	1	8	3
<i>Accipitridae</i>	Accipitridae	5	2	3	3	1
<i>Accipiter spp.</i>	Accipiter	3	2	6	4	5
<i>Alauda arvensis/Alauda gulgula</i>	Eurasian Skylark/Oriental Skylark	26	31	3	165	15
<i>Hirundo rustica/Hirundo tahitica</i>	Hirundo rustica/Hirundo tahitica	1	0	50	9	3
<i>Pycnonotidae</i>	Pycnonotidae	3	4	15	2	8
<i>Phylloscopidae</i>	Phylloscopidae	9	11	7	18	9
<i>Horornis diphone/ borealis</i>	Japanese Bush Warbler/Manchurian Bush Warbler	3	1	1	2	1
<i>Timaliidae</i>	Timaliidae	10	4	2	1	1
<i>Garrulax taewanus/Garrulax canorus</i>	Garrulax	14	13	11	13	11
<i>Sturnidae</i>	Sturnidae	27	10	4	1	0
<i>Acridotheres spp.</i>	Acridotheres	4	0	14	34	15
<i>Turdidae</i>	Turdidae	74	106	115	132	71
<i>Turdidae</i>	Turdidae	47	20	11	30	3
<i>Dicaeidae</i>	Dicaeum	7	0	16	2	2
<i>Motacilla spp.</i>	Motacilla	10	11	19	19	21
<i>Anthus spp.</i>	Anthus	14	5	3	2	0
<i>Emberiza spp.</i>	Emberiza	26	54	67	35	30



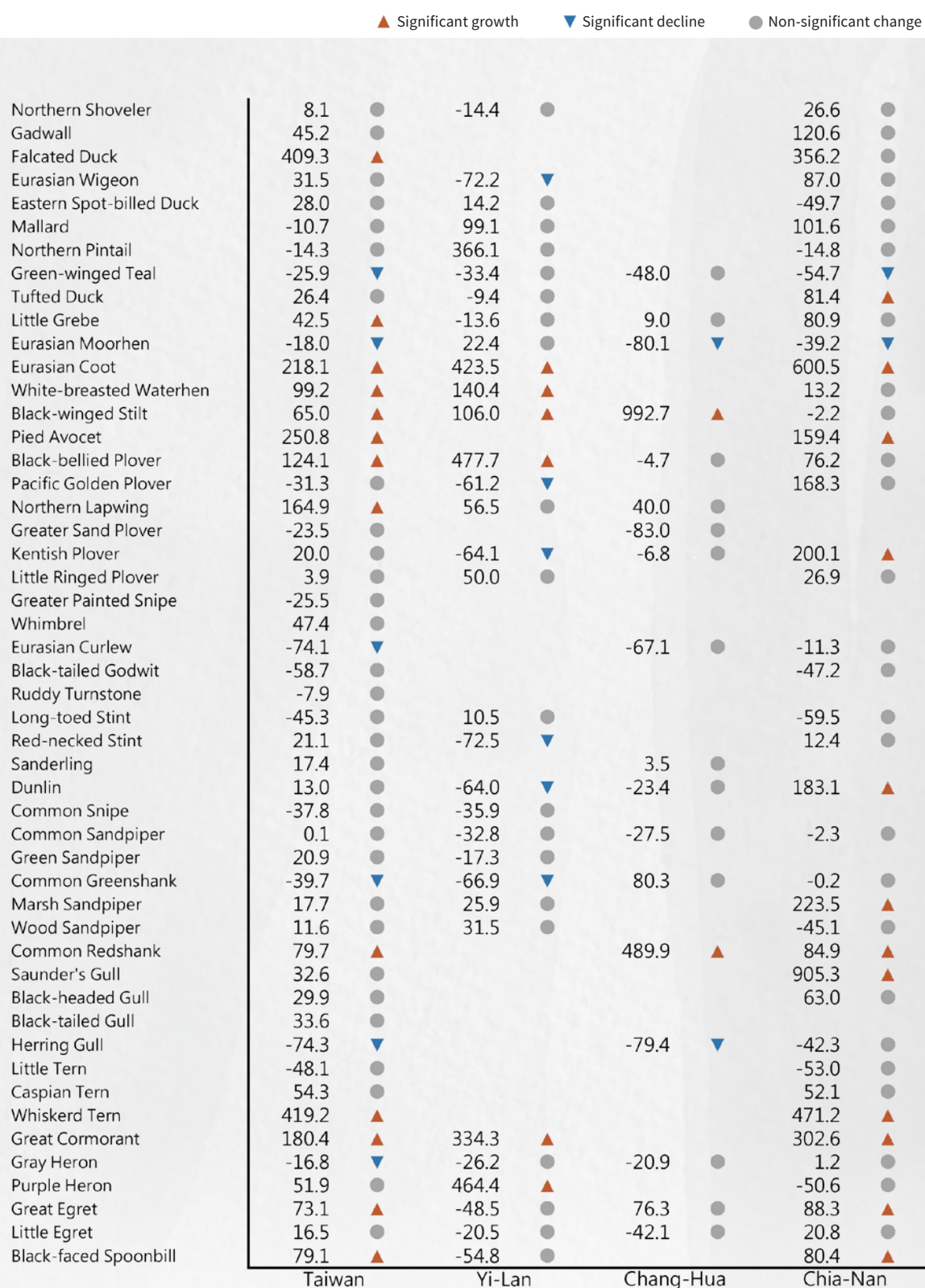
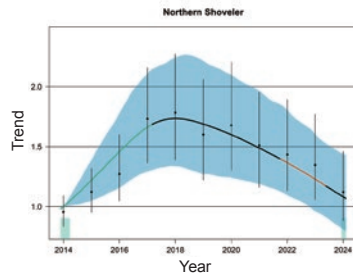


Figure 5. Population trends for wintering waterbirds in Taiwan proper (excluding outlying islands) between 2014 and 2024. Numbers indicate the estimated rate of change.

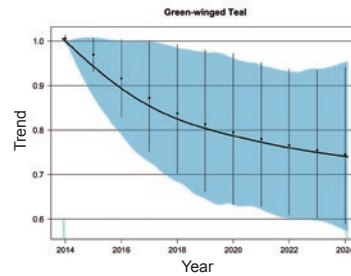


Population trends for waterbirds counted in Taiwan proper (excluding offshore islands) between 2014 and 2024. Green segments indicate periods of significant increase, while

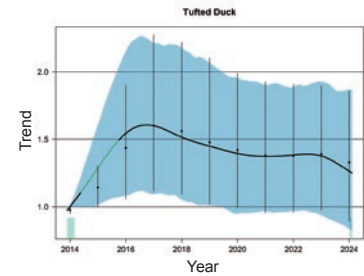
(a) Northern Shoveler



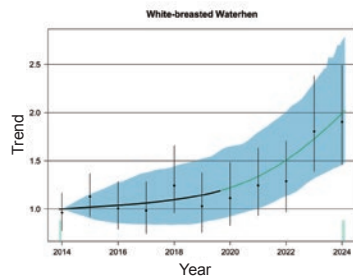
(b) Green-winged Teal



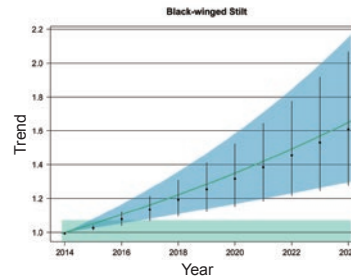
(c) Tufted Duck



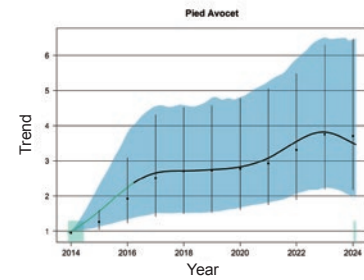
(g) White-breasted Waterhen



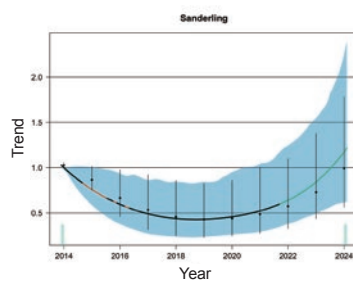
(h) Black-winged Stilt



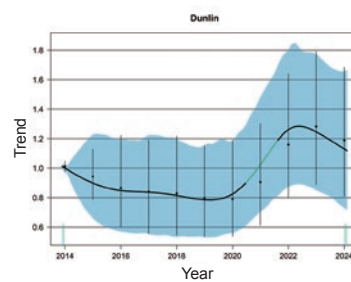
(i) Pied Avocet



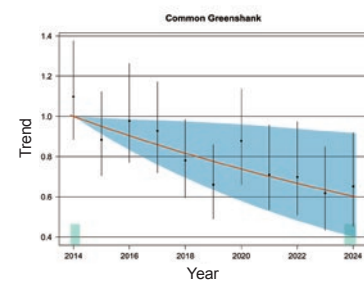
(m) Sanderling



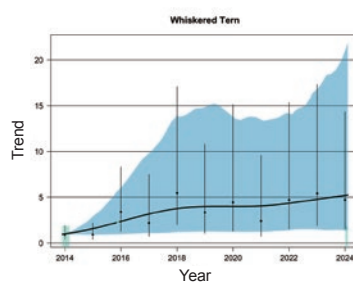
(n) Dunlin



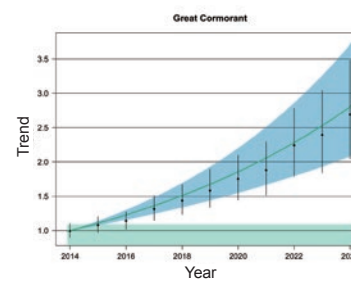
(o) Common Greenshank



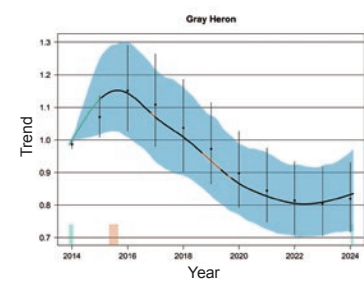
(r) Whiskered Tern



(s) Great Cormorant



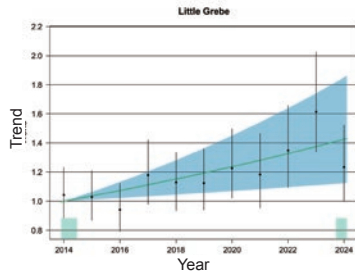
(t) Gray Heron



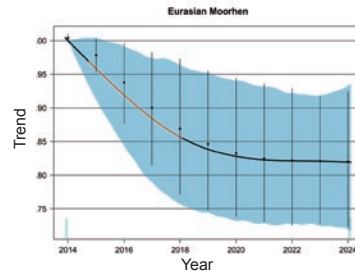


orange segments indicate periods of significant decrease. Periods where the curvature is significantly positive or negative are marked on the x axis by green and orange rectangles, respectively.

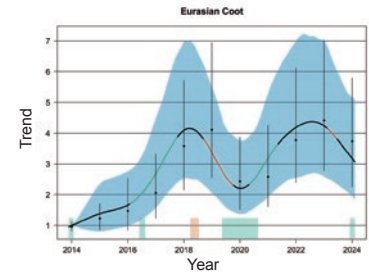
(d) Little Grebe



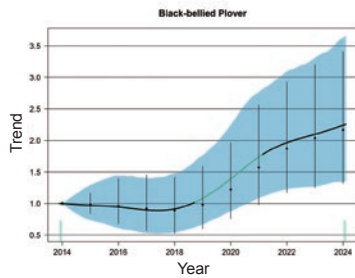
(e) Eurasian Moorhen



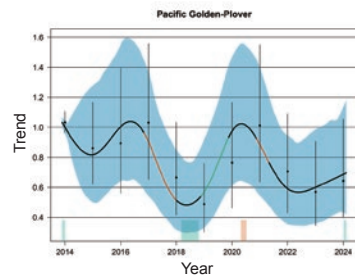
(f) Eurasian Coot



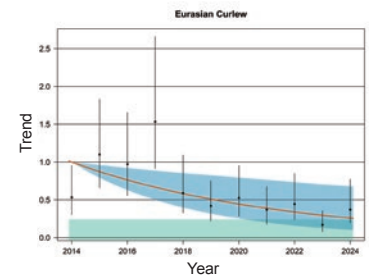
(j) Black-bellied Plover



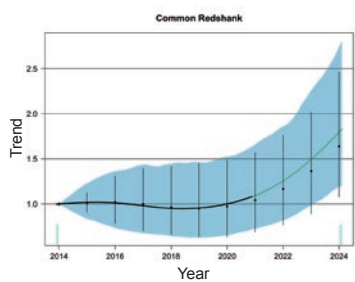
(k) Pacific Golden Plover



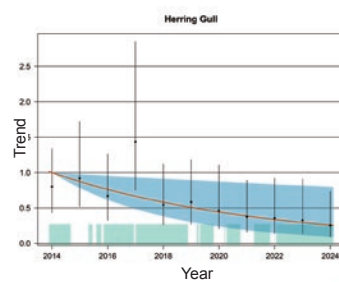
(l) Eurasian Curlew



(p) Common Redshank



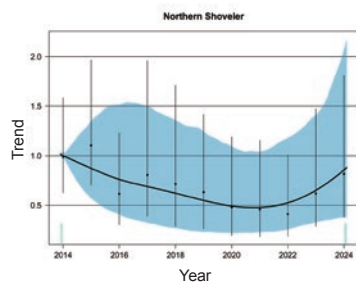
(q) Herring Gull



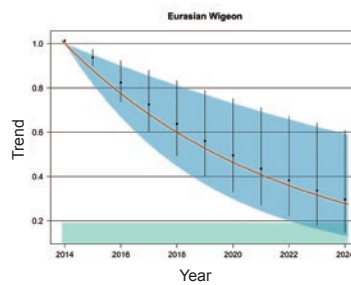


The Yilan Plain is a key wintering hotspot for waterbirds as well as the area with the highest number of species showing significant declines. This year, six waterbird species showed significant declines: Eurasian Wigeon (*Mareca penelope*), Pacific Golden-Plover (*Pluvialis fulva*), Kentish Plover (*Charadrius alexandrinus*), Red-necked Stint (*Calidris*

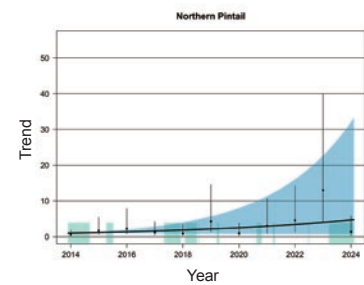
(a) Northern Shoveler



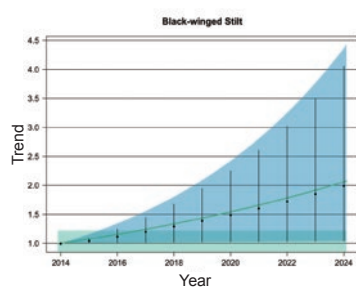
(b) Eurasian Wigeon



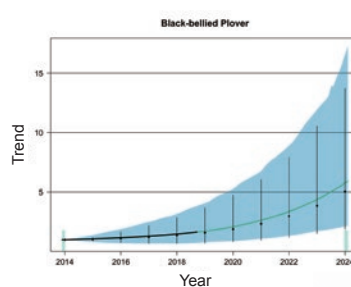
(c) Northern Pintail



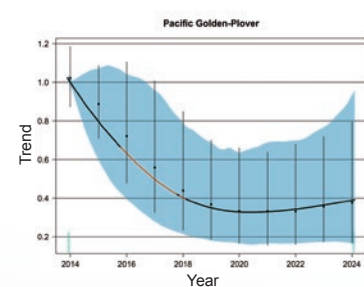
(g) Black-winged Stilt



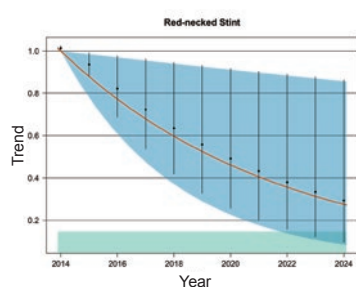
(h) Black-bellied Plover



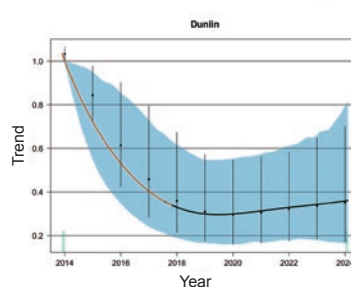
(i) Pacific Golden Plover



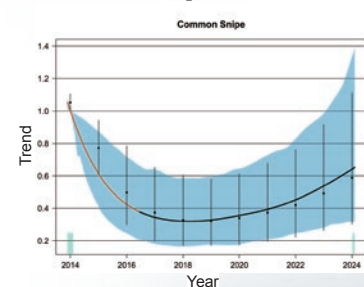
(m) Red-necked Stint



(n) Dunlin



(o) Common Snipe



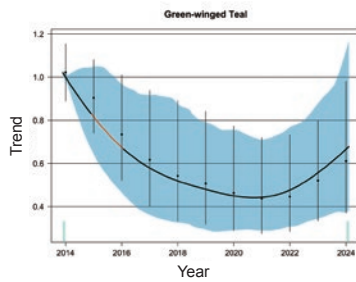
Population trends for waterbirds counted in the Yilan Plain between 2014 and 2024. Green segments indicate periods of significant increase, while orange segments indicate periods of significant decrease. Periods where the curvature is significantly positive or negative are marked on the x axis by green and orange rectangles, respectively.



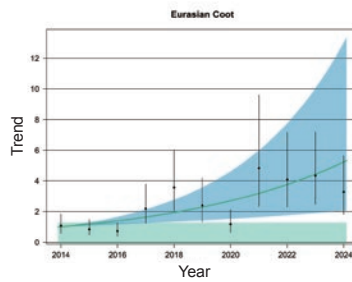


ruficollis), Dunlin (*Calidris alpina*), and Common Greenshank (*Tringa nebularia*). In contrast, Eurasian Coot (*Fulica atra*), Black-winged Stilt (*Himantopus himantopus*), and Black-bellied Plover (*Pluvialis squatarola*) showed significant increases.

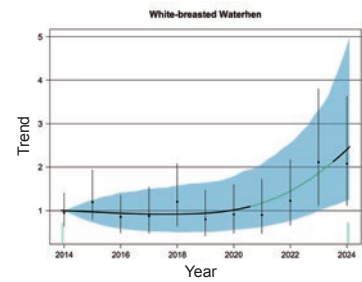
(d) Green-winged Teal



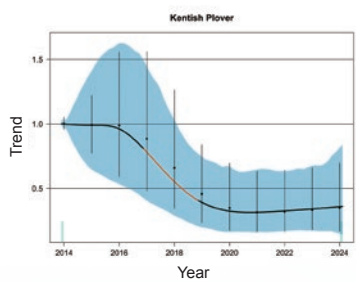
(e) Eurasian Coot



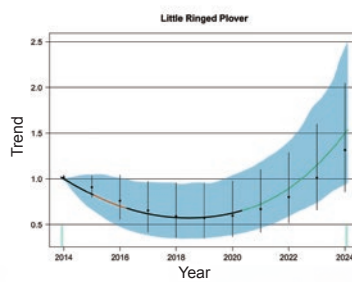
(f) White-breasted Waterhen



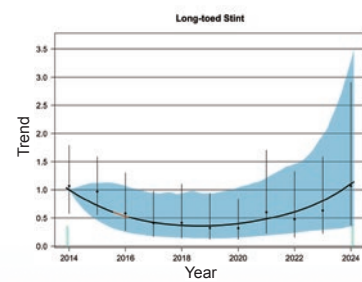
(j) Kentish Plover



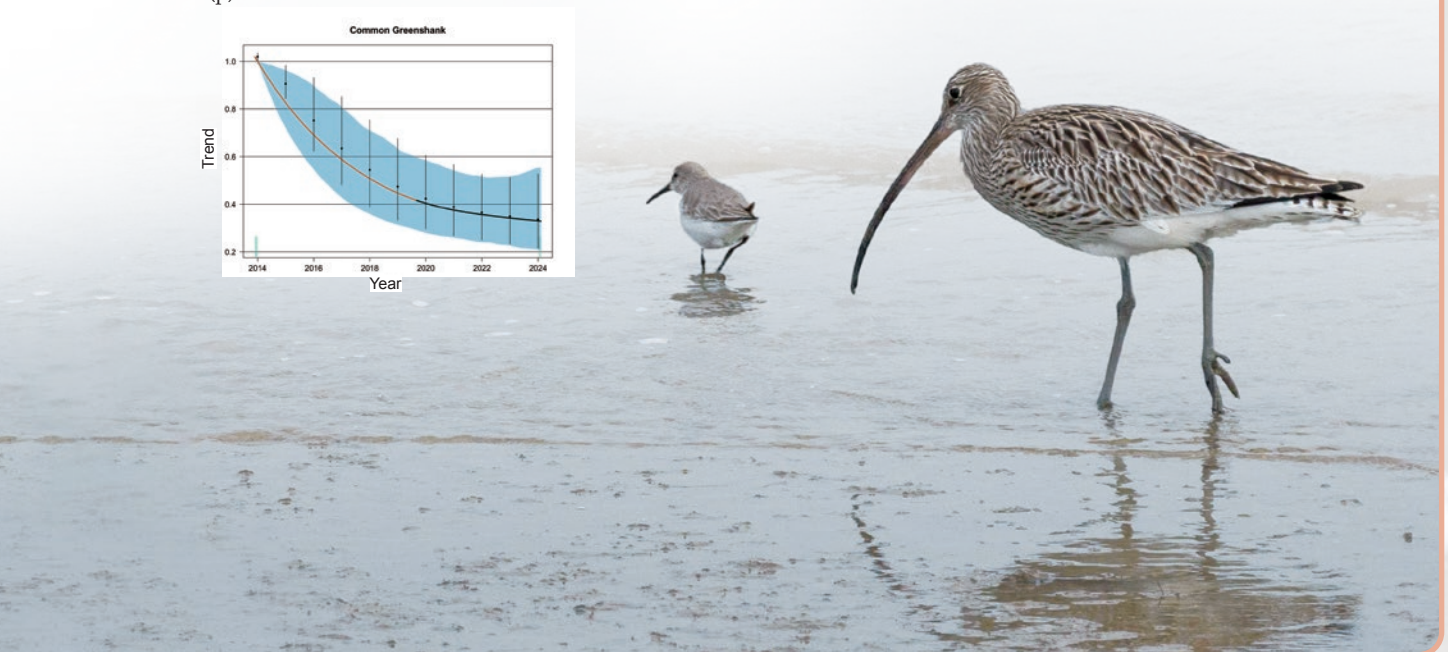
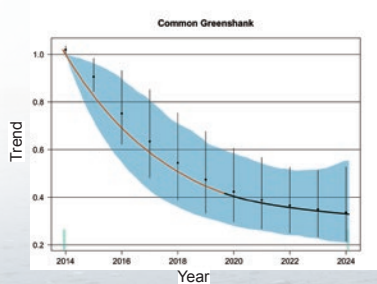
(k) Little Ringed Plover



(l) Long-toed Stint



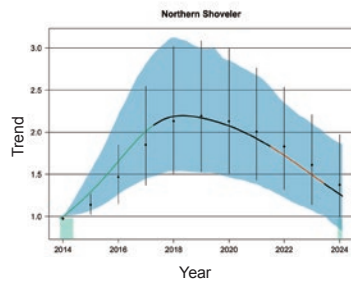
(p) Common Greenshank



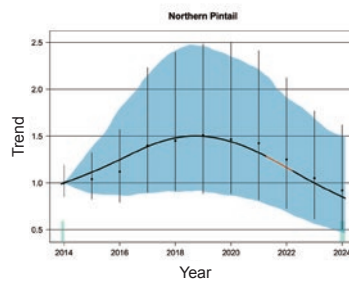


The Chianan Coast, which includes the Budai Salt Pan Wetlands in Chiayi County as well as the Sicao Wetlands and Chiku Wetlands in Tainan City, is also an extremely important hotspot for wintering waterbirds. In 2024, many species continued to show significant increasing trends, including Marsh Sandpiper (*Tringa stagnatilis*), Common Redshank (*Tringa totanus*),

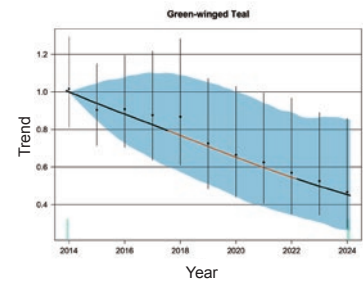
(a) Northern Shoveler



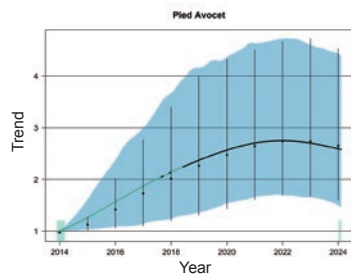
(b) Northern Pintail



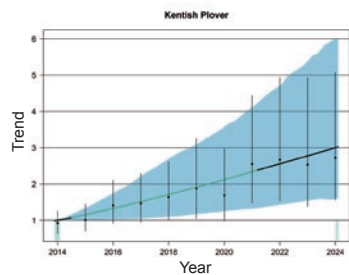
(c) Green-winged Teal



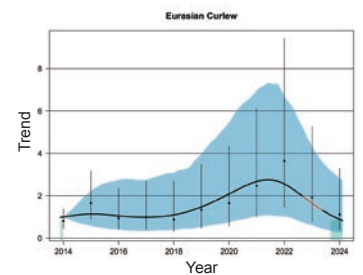
(g) Pied Avocet



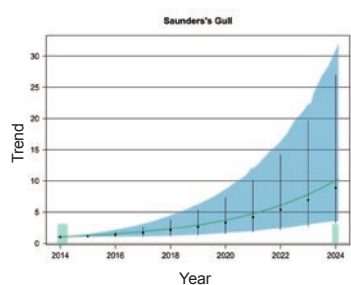
(h) Kentish Plover



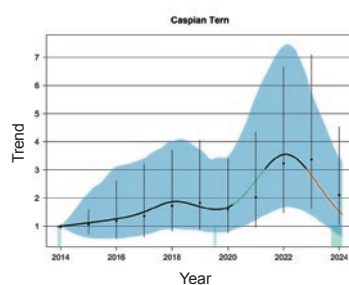
(i) Eurasian Curlew



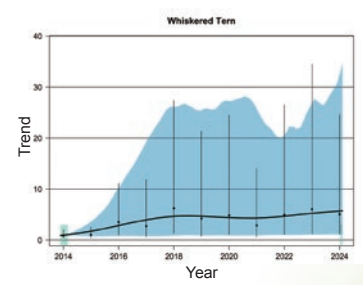
(m) Saunder's Gull



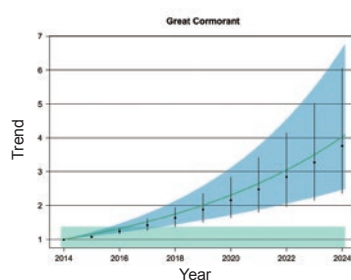
(n) Caspian Tern



(o) Whiskered Tern



(p) Great Cormorant

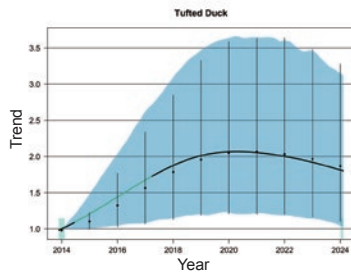


Population trends for waterbirds counted along the Chianan Coast between 2014 and 2024. Green segments indicate periods of significant increase, while orange segments indicate periods of significant decrease. Periods where the curvature is significantly positive or negative are marked on the x axis by green and orange rectangles, respectively.

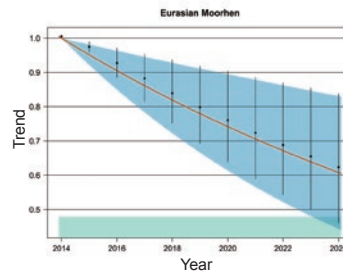


Saunders's Gull (*Chroicocephalus saundersi*) and Great Cormorant (*Phalacrocorax carbo*). Interestingly, Kentish Plover (*Charadrius alexandrinus*) and Dunlin (*Calidris alpina*) also showed increased numbers, though both have shown significant declines in the Yilan Plain. However, Eurasian Teal (*Anas crecca*) and Common Moorhen (*Gallinula chloropus*) showed significant declines, warranting continued monitoring.

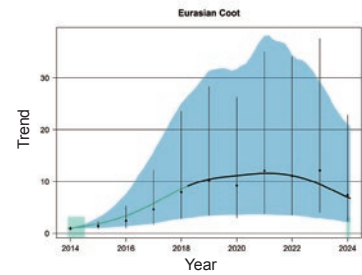
(d) Tufted Duck



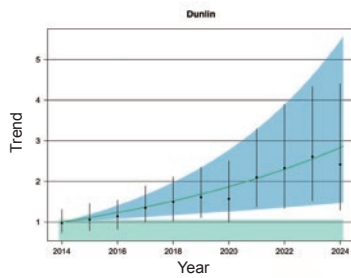
(e) Eurasian Moorhen



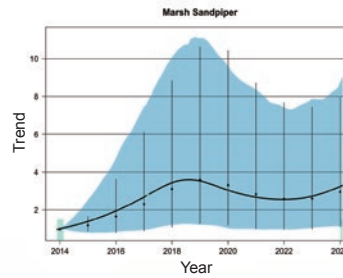
(f) Eurasian Coot



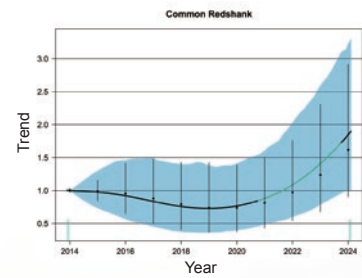
(j) Dunlin



(k) Marsh Sandpiper



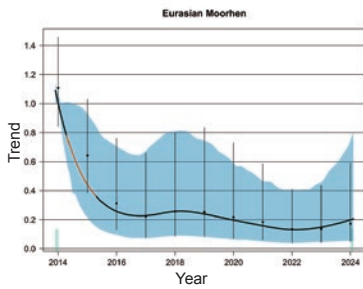
(l) Common Redshank



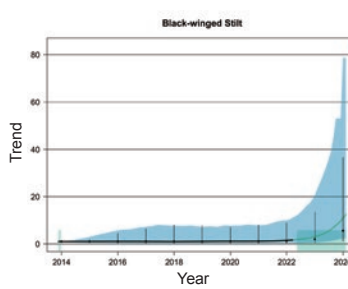


The Changhua Coast, with its extensive mudflats, is an important habitat for waterbirds. Black-winged Stilt (*Himantopus himantopus*) and Common Redshank (*Tringa totanus*) showed significant increasing trends, while Sanderling (*Calidris alba*) remained stable after showing an increase last year. Meanwhile, Eurasian Curlew (*Numenius arquata*) showed a declining trend, and Herring Gull (*Larus argentatus*) showed a significant decline.

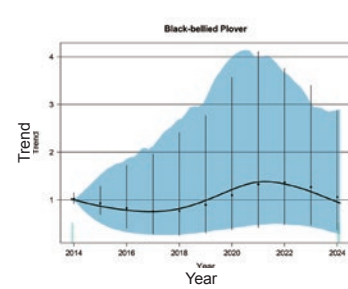
(a) Eurasian Moorhen



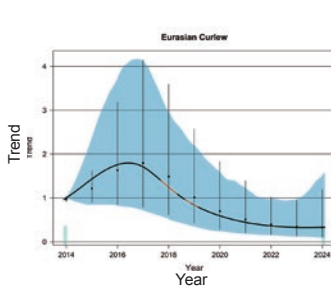
(b) Black-winged Stilt



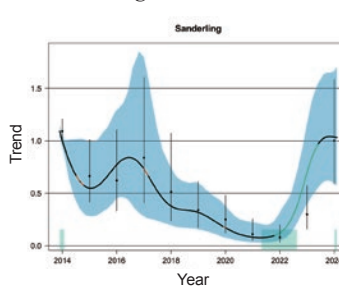
(c) Black-bellied Plover



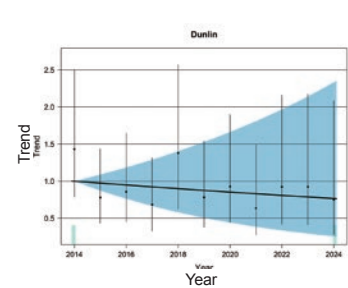
(d) Eurasian Curlew



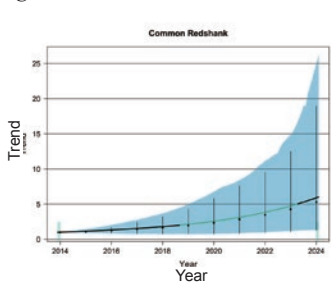
(e) Sanderling



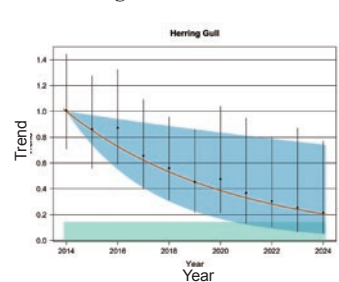
(f) Dunlin



(g) Common Redshank



(h) Herring Gull



Population trends for waterbirds counted along the Changhua Coast between 2014 and 2024. Green segments indicate periods of significant increase, while orange segments indicate periods of significant decrease. Periods where the curvature is significantly positive or negative are marked on the x axis by green and orange rectangles, respectively.



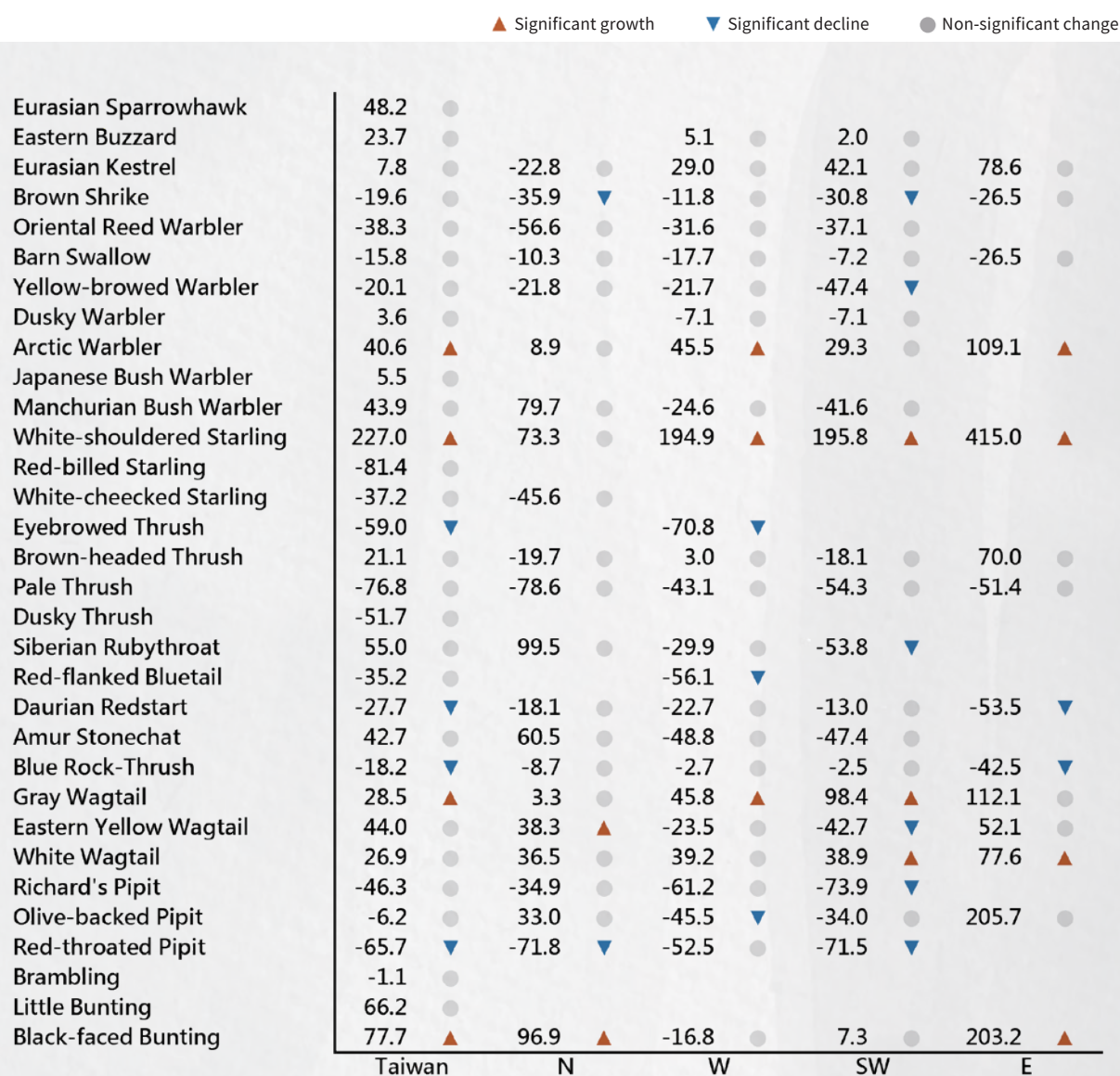


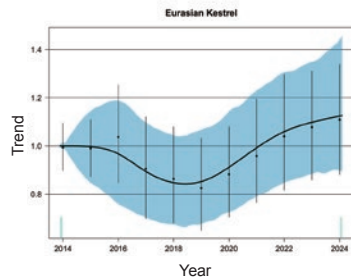
Figure 6: Population trends for wintering landbirds in Taiwan proper (excluding outlying islands) between 2014 and 2024. Numbers indicate the estimated rate of change.



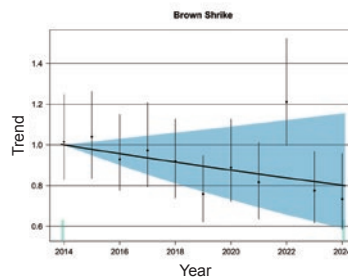


This year marks the first time that common wintering landbird population trends have been analyzed. For Taiwan proper as a whole, Arctic Warbler (*Phylloscopus borealis*), White-shouldered Starling (*Sturnia sinensis*), and Black-faced Bunting (*Emberiza spodocephala*) showed significant increases. Meanwhile, Oriental Reed

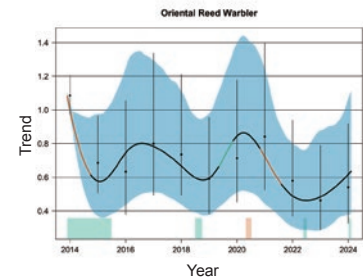
(a) Eurasian Kestrel



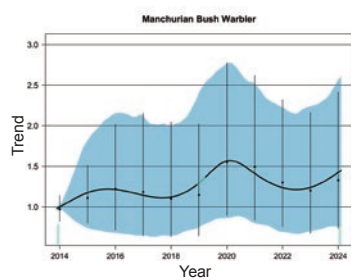
(b) Brown Shrike



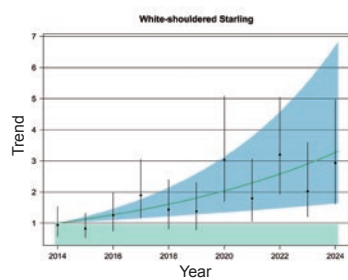
(c) Oriental Reed Warbler



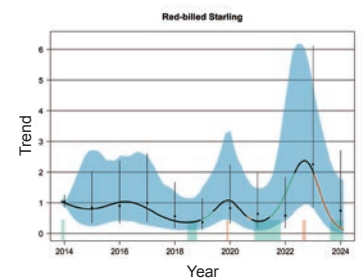
(g) Manchurian Bush Warbler



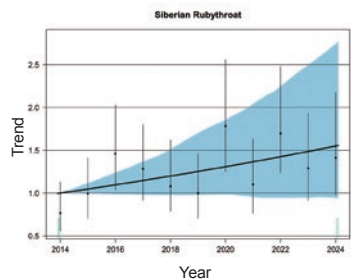
(h) White-shouldered Starling



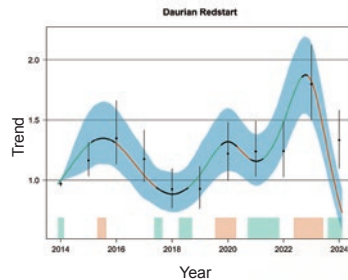
(i) Red-billed Starling



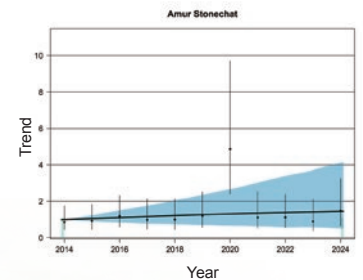
(m) Siberian Rubythroat



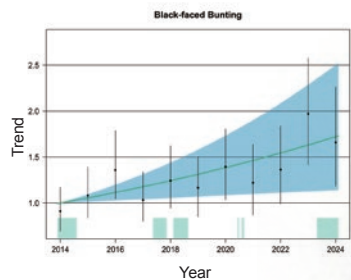
(n) Daurian Redstart



(o) Amur Stonechat



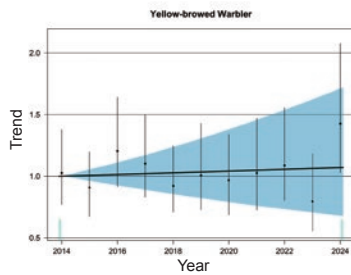
(s)(s) Black-faced Bunting



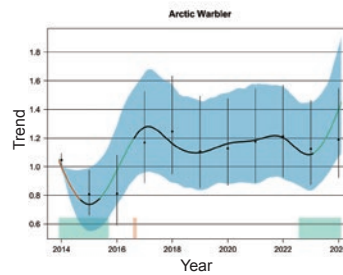


Warbler (*Acrocephalus orientalis*), Red-billed Starling (*Spodiopsar sericeus*), and Daurian Redstart (*Phoenicurus aureus*) exhibited clear year-to-year fluctuations. Eyebrowed Thrush (*Turdus obscurus*) and Red-throated Pipit (*Anthus cervinus*) showed significant declines and deserve closer attention.

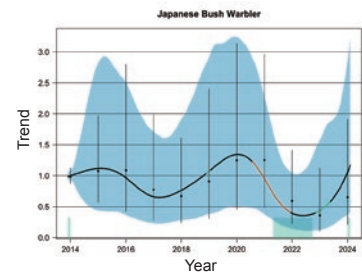
(d) Yellow-browed Warbler



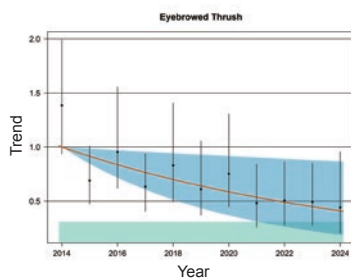
(e) Arctic Warbler



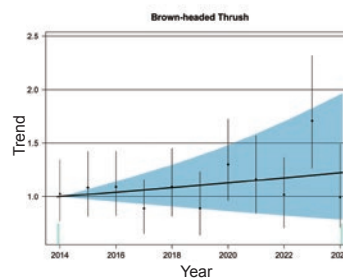
(f) Japanese Bush Warbler



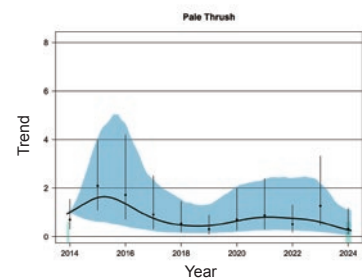
(j) Eyebrowed Thrush



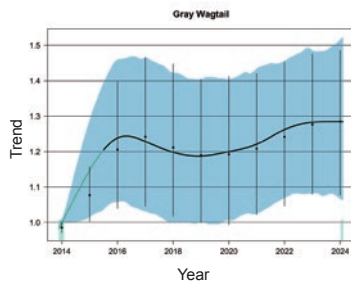
(k) Brown-headed Thrush



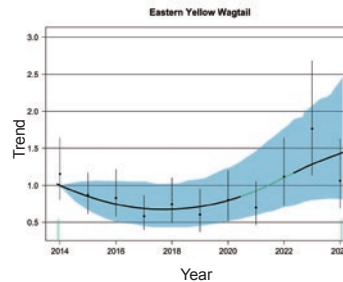
(l) Pale Thrush



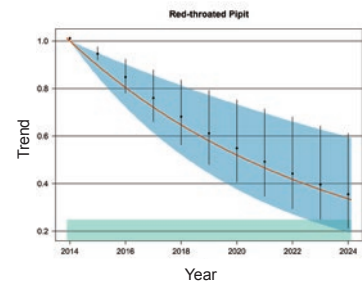
(p) Gray Wagtail



(q) Eastern Yellow Wagtail



(r) Red-throated Pipit

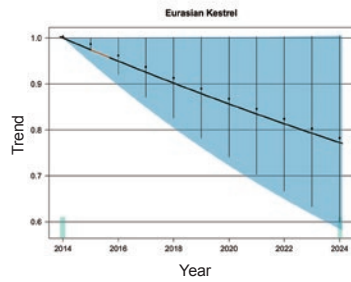


Population trends for wintering landbirds in Taiwan proper (excluding offshore islands) between 2014 and 2024. Green segments indicate periods of significant increase, while orange segments indicate periods of significant decrease. Periods where the curvature is significantly positive or negative are marked on the x axis by green and orange rectangles, respectively.

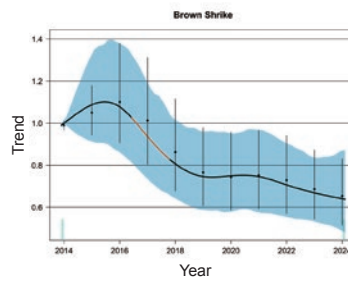


In Northern Taiwan, significantly declining species included farmland birds such as Eurasian Kestrel (*Falco tinnunculus*), Brown Shrike (*Lanius cristatus*), and Red-throated Pipit (*Anthus cervinus*). In contrast, Eastern Yellow Wagtail (*Motacilla tschutschensis*) and Black-faced Bunting (*Emberiza spodocephala*) showed significant increases.

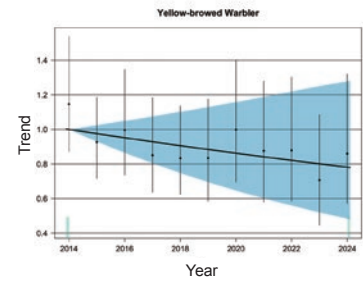
(a) Eurasian Kestrel



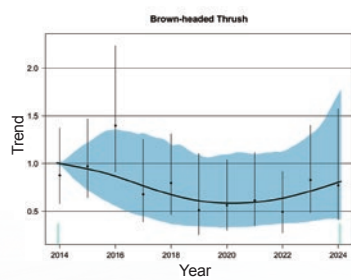
(b) Brown Shrike



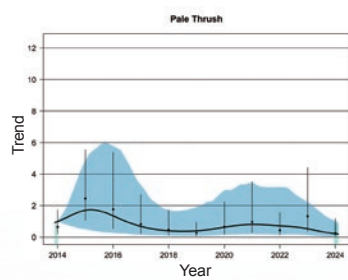
(c) Yellow-browed Warbler



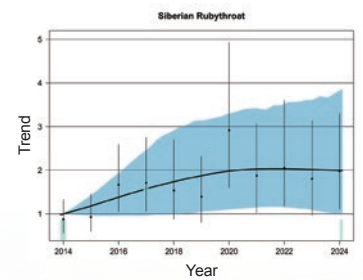
(g) Brown-headed Thrush



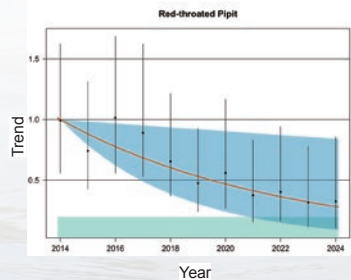
(h) Pale Thrush



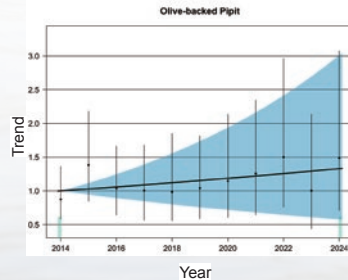
(i) Siberian Rubythroat



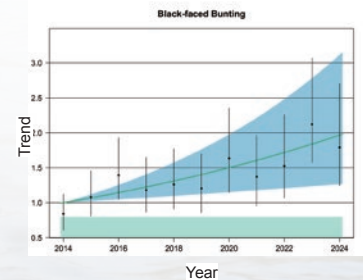
(m) Red-throated Pipit



(n) Olive-backed Pipit



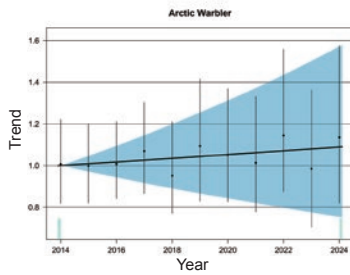
(o) Black-faced Bunting



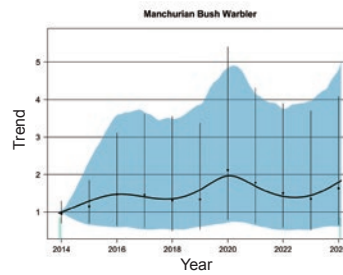


Population trends for wintering landbirds in Northern Taiwan between 2014 and 2024. Green segments indicate periods of significant increase, while orange segments indicate periods of significant decrease. Periods where the curvature is significantly positive or negative are marked on the x axis by green and orange rectangles, respectively.

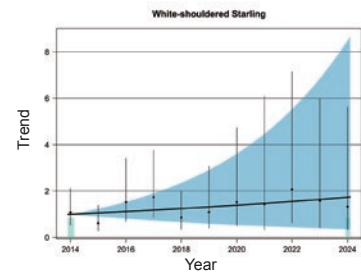
(d) Arctic Warbler



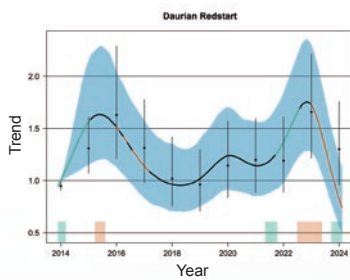
(e) Manchurian Bush Warbler



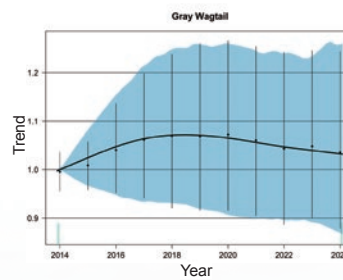
(f) White-shouldered Starling



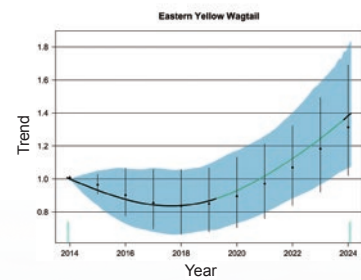
(j) Daurian Redstart

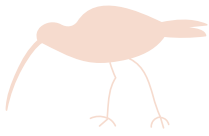


(k) Gray Wagtail



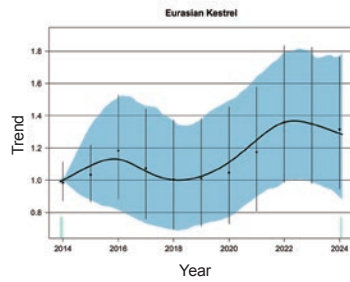
(l) Eastern Yellow Wagtail



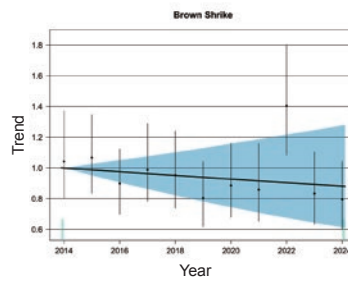


Several forest bird species that remained stable in other regions showed declines in Western Taiwan. Examples include Eyebrowed Thrush (*Turdus obscurus*) and Olive-backed Pipit (*Anthus hodgsoni*), while Pale Thrush (*Turdus pallidus*) also showed a near-significant decline. In contrast, Arctic Warbler (*Phylloscopus borealis*) and White-shouldered Starling (*Sturnia sinensis*) showed significant increases.

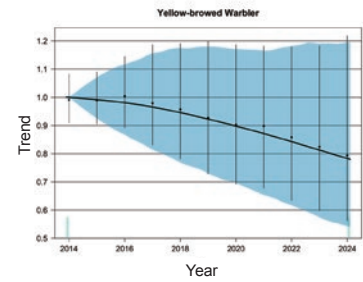
(a) Eurasian Kestrel



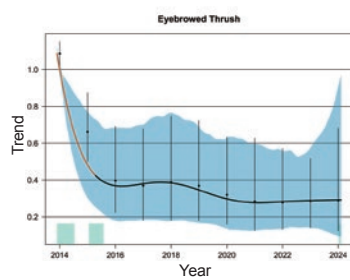
(b) Brown Shrike



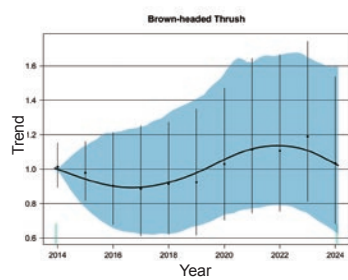
(c) Yellow-browed Warbler



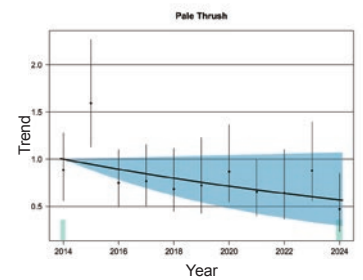
(g) Eyebrowed Thrush



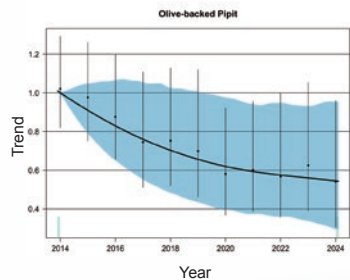
(h) Brown-headed Thrush



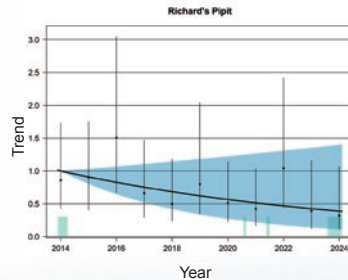
(i) Pale Thrush



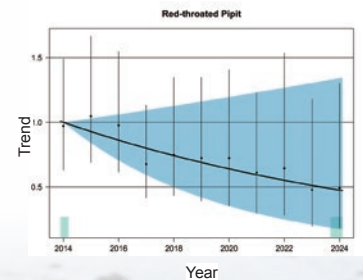
(m) Olive-backed Pipit



(n) Richard's Pipit



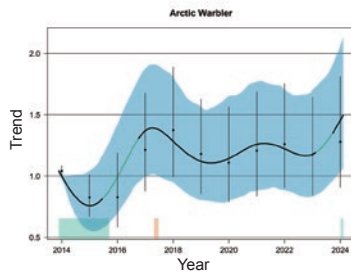
(o) Red-throated Pipit



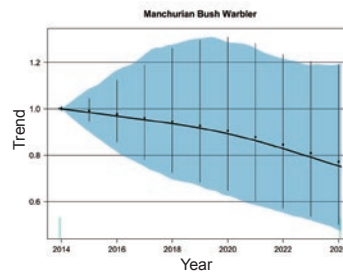


Population trends for wintering landbirds in Western Taiwan between 2014 and 2024. Green segments indicate periods of significant increase, while orange segments indicate periods of significant decrease. Periods where the curvature is significantly positive or negative are marked on the x axis by green and orange rectangles, respectively.

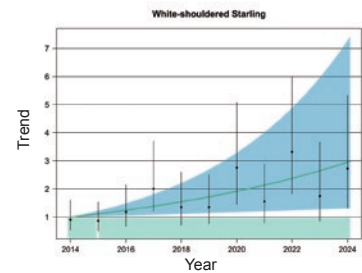
(d) Arctic Warbler



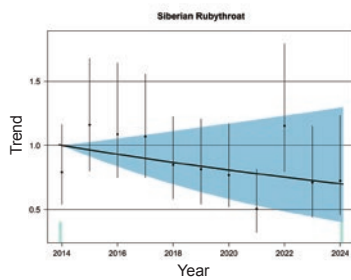
(e) Manchurian Bush Warbler



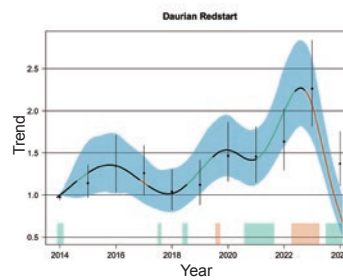
(f) White-shouldered Starling



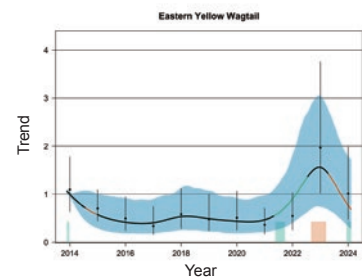
(j) Siberian Rubythroat



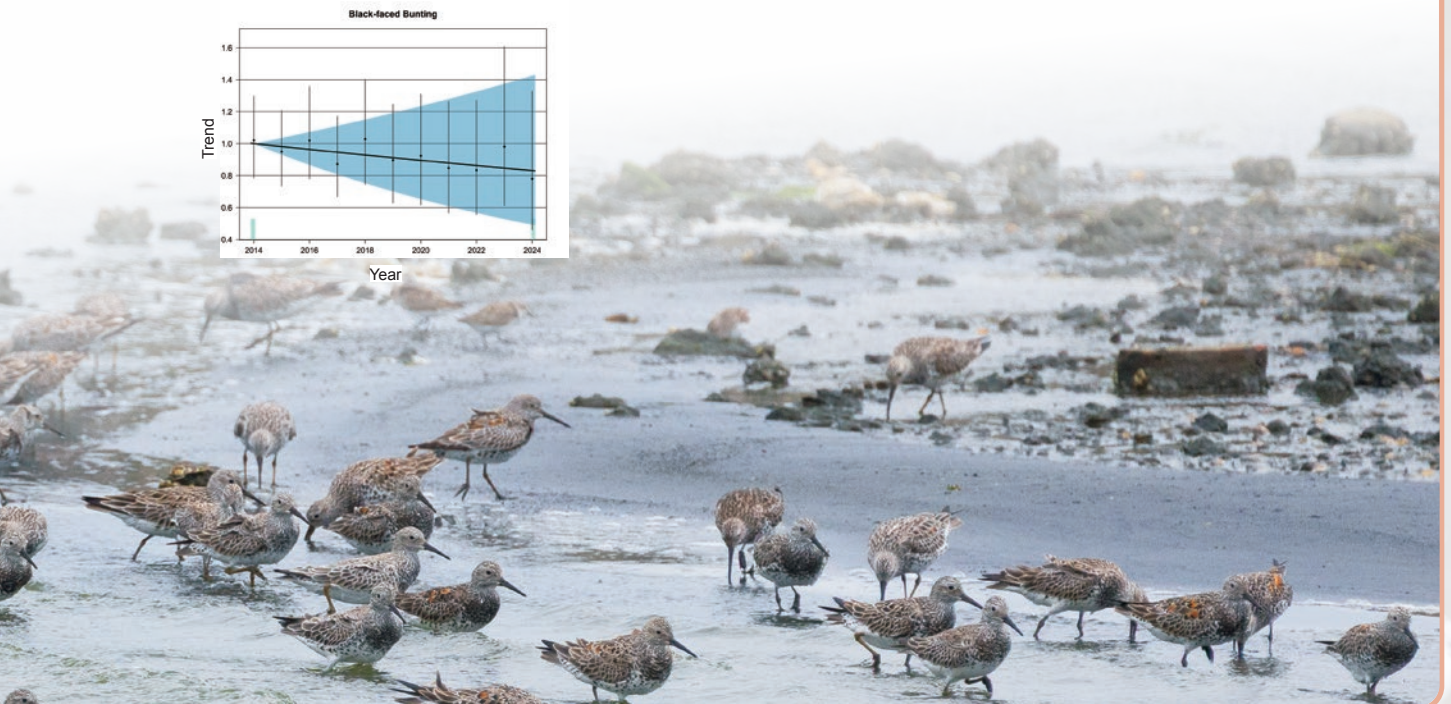
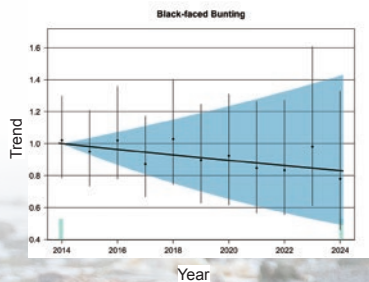
(k) Daurian Redstart



(l) Eastern Yellow Wagtail



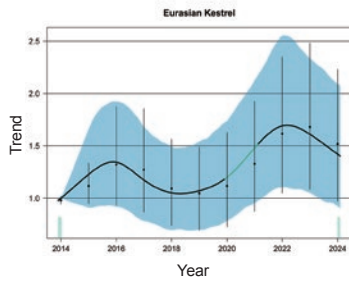
(p) Black-faced Bunting



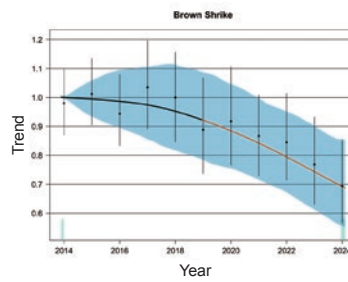


Southwestern Taiwan recorded the highest number of significantly declining species island-wide, particularly for farmland birds. Brown Shrike (*Lanius cristatus*), Siberian Rubythroat (*Calliope calliope*), Richard's Pipit (*Anthus richardi*), Red-throated Pipit (*Anthus cervinus*), and Yellow-browed Warbler (*Phylloscopus inornatus*) all showed significant declines, while White-shouldered Starling (*Sturnia sinensis*) showed a significant increase.

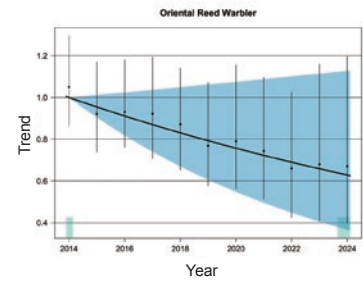
(a) Eurasian Kestrel



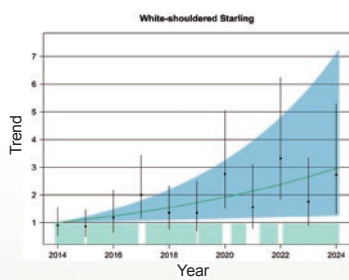
(b) Brown Shrike



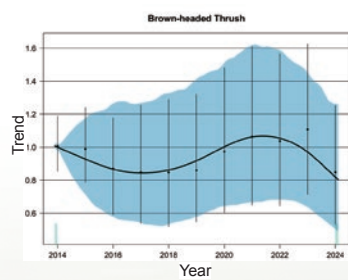
(c) Oriental Reed Warbler



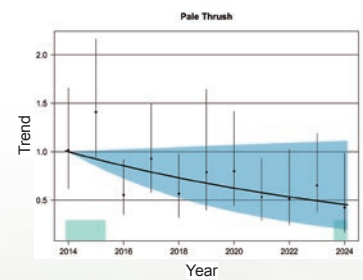
(g) White-shouldered Starling



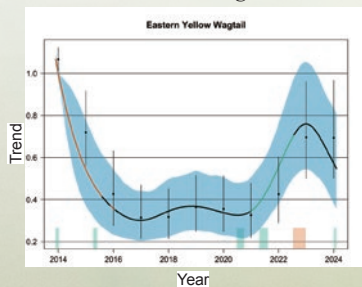
(h) Brown-headed Thrush



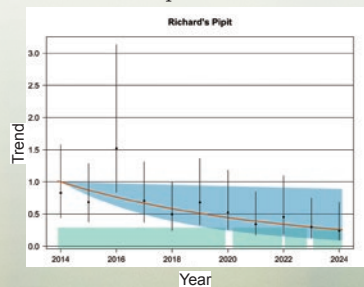
(i) Pale Thrush



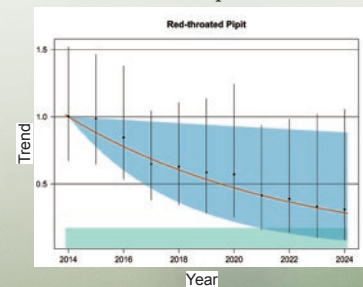
(m) Eastern Yellow Wagtail



(n) Richard's Pipit



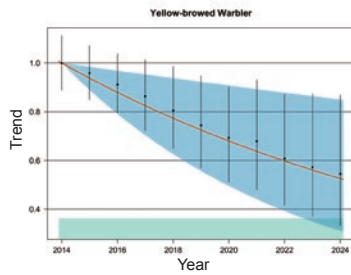
(o) Red-throated Pipit



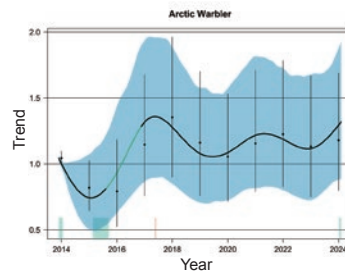


Population trends for wintering landbirds in Southwestern Taiwan between 2014 and 2024. Green segments indicate periods of significant increase, while orange segments indicate periods of significant decrease. Periods where the curvature is significantly positive or negative are marked on the x axis by green and orange rectangles, respectively.

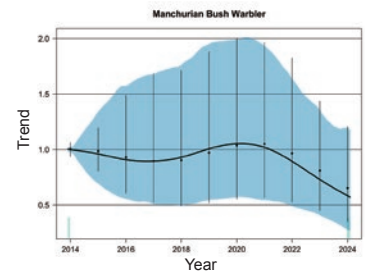
(d) Yellow-browed Warbler



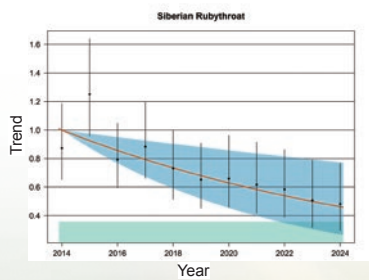
(e) Arctic Warbler



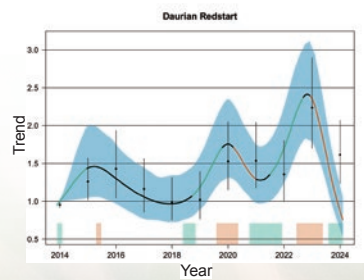
(f) Manchurian Bush Warbler



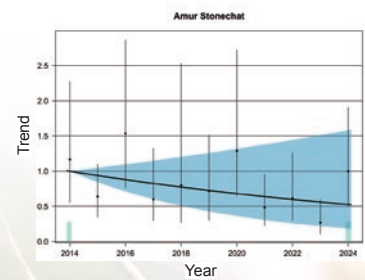
(j) Siberian Rubythroat



(k) Daurian Redstart



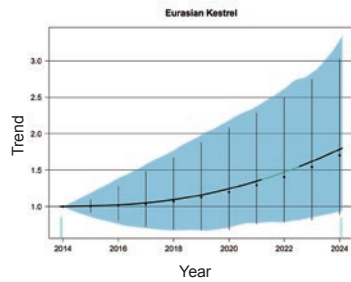
(l) Amur Stonechat



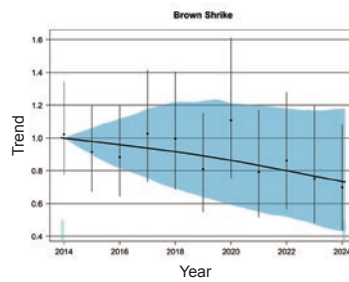


Arctic Warbler (*Phylloscopus borealis*), White-shouldered Starling (*Sturnia sinensis*), Grey Wagtail (*Motacilla cinerea*), and Black-faced Bunting (*Emberiza spodocephala*) all showed significant increases in Eastern Taiwan. While overall population trends there appear relatively positive, fewer species had enough data to draw year-by-year trends compared to other regions, making long-term monitoring by citizen scientists especially important.

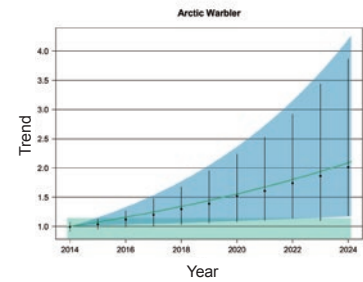
(a) Eurasian Kestrel



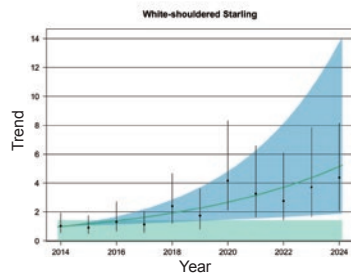
(b) Brown Shrike



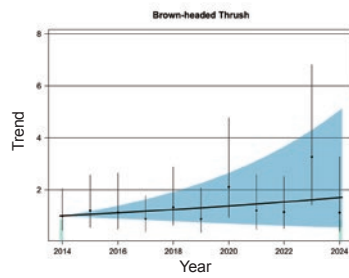
(c) Arctic Warbler



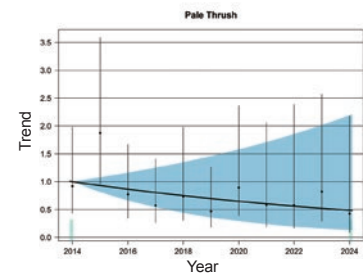
(d) White-shouldered Starling



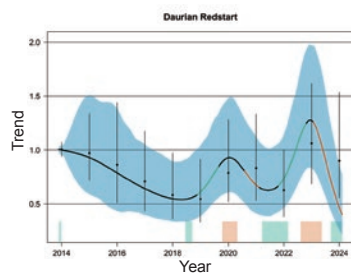
(e) Brown-headed Thrush



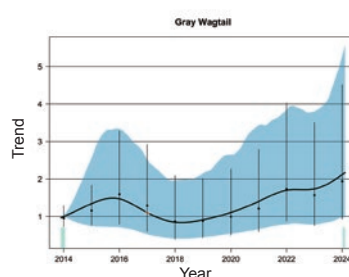
(f) Pale Thrush



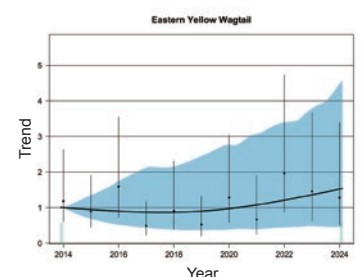
(g) Daurian Redstart



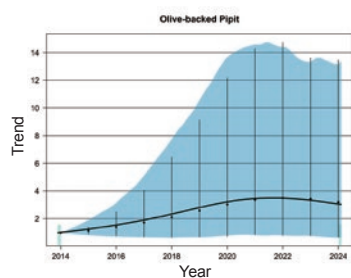
(h) Gray Wagtail



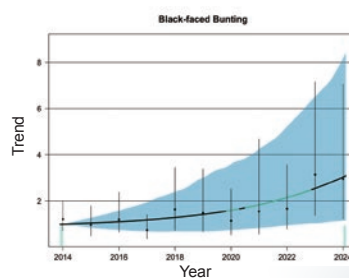
(i) Eastern Yellow Wagtail



(j) Olive-backed Pipit



(k) Black-faced Bunting



Population trends for wintering landbirds in Eastern Taiwan between 2014 and 2024. Green segments indicate periods of significant increase, while orange segments indicate periods of significant decrease. Periods where the curvature is significantly positive or negative are marked on the x axis by green and orange rectangles, respectively.



▲ Significant growth

▼ Significant decline

● Non-significant change

Northern Shovler	13.2	●	Dunlin	418.2	▲
Eurasian Eigeon	17.4	●	Common Snipe	80.9	●
Eastern Spot-billed Duck	27.7	●	Common Sandpiper	32.9	●
Mallard	211.9	▲	Green Sandpiper	46.8	●
Northern Pintail	-64.0	▼	Common Greenshank	-23.2	●
Green-winged Teal	32.0	●	Common Redshank	94.4	●
Tufted Duck	178.1	●	Black-headed Gull	567.0	▲
Ring-necked Pheasant	-53.6	●	Great Cormorant	-20.7	●
Indian Peafowl	318.8	▲	Gray Heron	15.3	●
Greater Coucal	142.3	▲	Chinese Pond Heron	45.7	●
Little Grebe	100.7	▲	Eurasian Spoonbill	94.9	●
Crested Grebe	-11.7	●	Black-faced Spoonbill	10.2	●
Eurasian Moorhen	34.8	●	Osprey	48.8	▲
Eurasian Coot	65.0	●	Eastern Buzzard	80.7	▲
White-breasted Waterhen	17.5	●	Common Kingfisher	3.1	●
Black-winged Stilt	173.3	▲	White-throated Kingfisher	-11.7	●
Pied Avocet	184.6	●	Pied Kingfisher	43.9	●
Eurasian Oystercatcher	-12.4	●	Eurasian Hoopoe	161.3	▲
Black-bellied Plover	300.3	▲	Eurasian Kestrel	104.9	●
Pacific Golden Plover	2.5	●	Collared Crow	119.3	▲
Greater Sand Plover	-30.5	●	Plain Prinia	85.8	▲
Kentish Plover	-12.3	●	Pacific Swallow	1057.9	▲
Little Ringed Plover	177.9	●	Light-vented Bulbul	77.3	▲
Whimbrel	113.4	●	Yellow-browed Warbler	-17.8	●
Eurasian Curlew	-25.3	●	Dusky Warbler	-4.2	●
Black-tailed Godwit	84.5	●	Blue Whistling-Thrush	214.5	▲
Ruddy Turnstone	175.8	●	Daurian Redstart	-68.0	▼
Red-necked Stint	-63.1	●	Amur Stonechat	124.7	▲
Sanderling	-58.5	●			

Kinmen

Kinmen

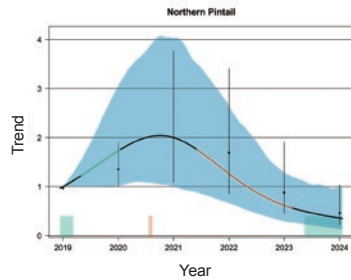
Figure 7: Population trends for birds counted in the Kinmen Islands between 2019 and 2024. Numbers indicate the estimated rate of change.



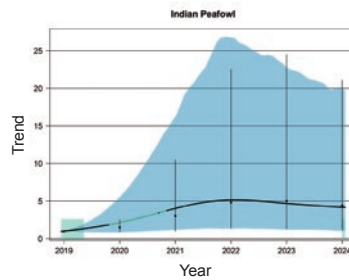


The Taiwan NYBC has only taken place in the Kinmen Islands since 2019, so there were only six years of data to review. For waterbirds, Little Grebe (*Tachybaptus ruficollis*), Black-bellied Plover (*Pluvialis squatarola*), and Dunlin (*Calidris alpina*) all showed significant increases. Northern Pintail (*Anas acuta*) showed a significant decline, while Great Cormorant (*Phalacrocorax carbo*) also showed a declining trend but it did not reach statistical significance.

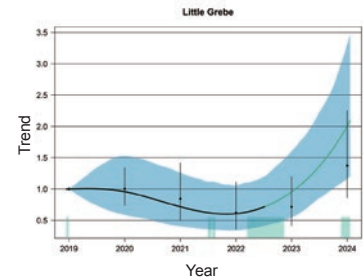
(a) Eurasian Kestrel



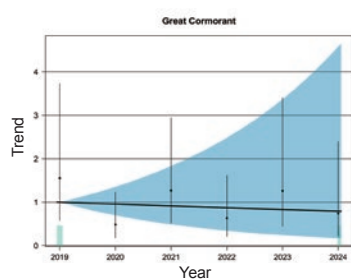
(b) Indian Peafowl



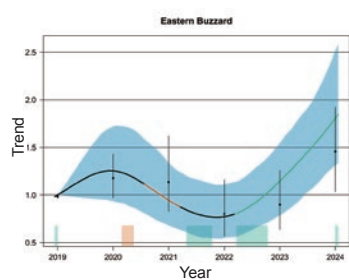
(c) Little Grebe



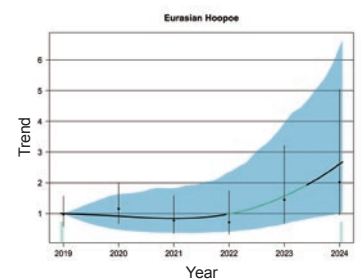
(g) Great Cormorant



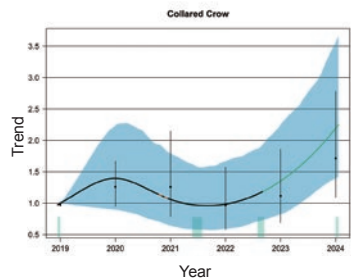
(h) Eastern Buzzard



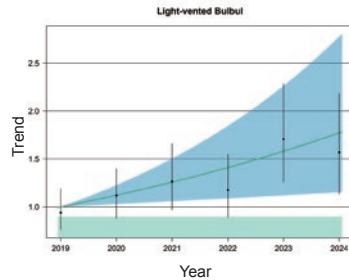
(i) Eurasian Hoopoe



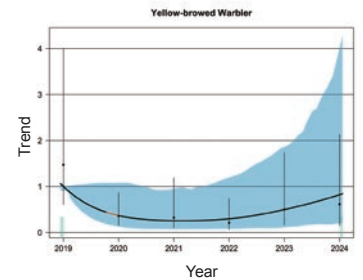
(m) Collared Crow



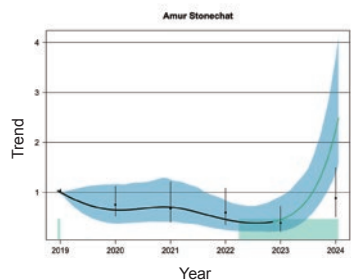
(n) Light-vented Bulbul



(o) Yellow-browed Warbler



(s) Amur Stonchat

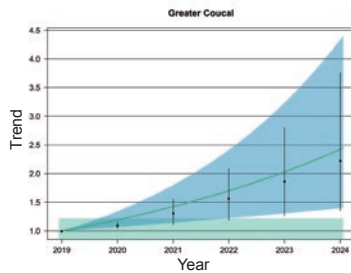


Population trends for birds counted in the Kinmen Islands between 2019 and 2024. Green segments indicate periods of significant increase, while orange segments indicate periods of significant decrease. Periods where the curvature is significantly positive or negative are marked on the x axis by green and orange rectangles, respectively.

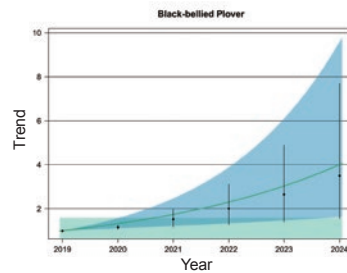


For landbirds, Indian Peafowl (*Pavo cristatus*), Greater Coucal (*Centropus sinensis*), Eastern Buzzard (*Buteo japonicus*), Eurasian Hoopoe (*Upupa epops*), Collared Crow (*Corvus torquatus*), Light-vented Bulbul (*Pycnonotus sinensis*), and Blue Whistling Thrush (*Myophonus caeruleus*) all showed significant increases. Meanwhile, Eurasian Kestrel (*Falco tinnunculus*) showed a near-significant upward trend. Amur Stonechat (*Saxicola stejnegeri*) showed an increase after a decrease last year, while Daurian Redstart (*Phoenicurus aureus*) displayed clear year-to-year fluctuations.

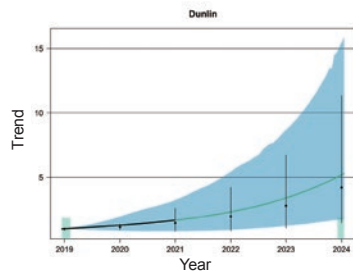
(d) Greater Coucal



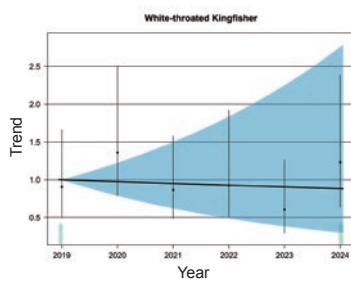
(e) Black-bellied Plover



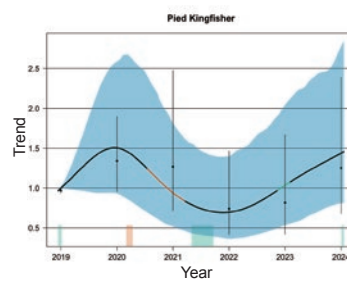
(f) Dunlin



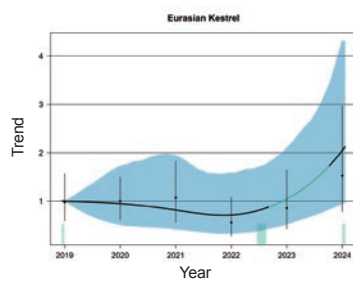
(j) White-throated Kingfisher



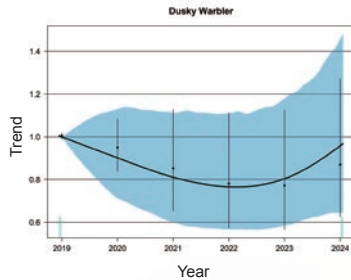
(k) Pied Kingfisher



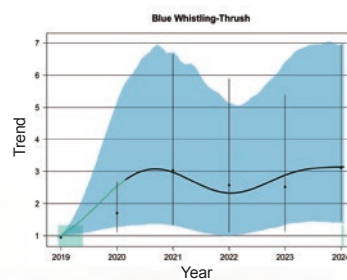
(l) Eurasian Kestrel



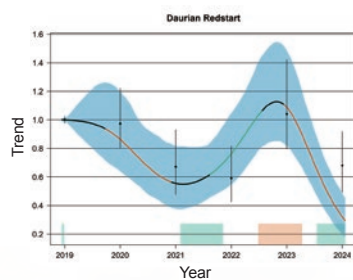
(p) Dusky Warbler



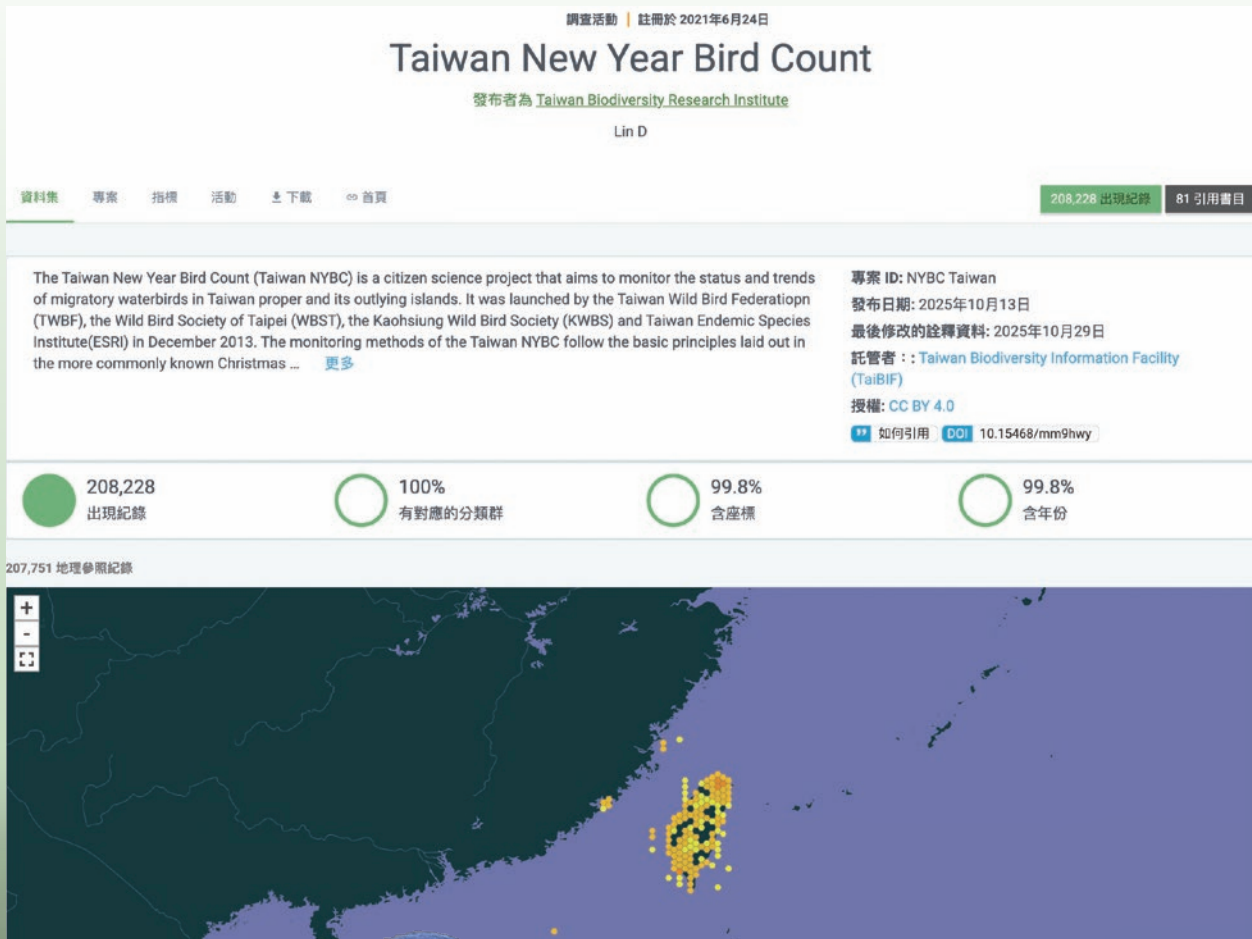
(q) Blue Whistling-Thrush



(r) Daurian Redstart



Open Data



All Taiwan NYBC data is open to the public and can be found at the Global Biodiversity Information Facility (GBIF)

<https://www.gbif.org/dataset/4daa291b-0e9d-4e21-b78d-6b4e96093adc>

(This year, organizers uploaded all NYBC data (182,271 observations) between 2014 and 2024 to GBIF with bilingual metadata.)

NYBC data@ GBIF





Support the NYBC

Help us continue the count!

The Taiwan NYBC is one of the most successful citizen science projects in Taiwan. The data collected is critically important to conservation initiatives at both the local and international level, helping inform the decisions of conservationists and policy-makers alike. Yet its success is dependent on a number of factors, one of the main ones being financing. To learn more about how you could help to support this important annual event, contact the Taiwan NYBC at nybc@bird.org.tw or visit us at <https://nybc.tw>

Illustrators



Tamako Diary

Facebook page: 玉子日記
cindykuo1114@gmail.com



Daylily

daylily5555@gmail.com

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Taiwan New Year Bird Count 2024 Annual Report

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Issuers	Chang Jui-lin (張瑞麟), Yang Jia-dong (楊嘉棟)
Authors	Chi Po-wei (紀博璋), Tsai Chih-yi (蔡芷怡), Chao Jung (趙容), Scott Pursner (潘森識), Allen Lyu (呂翊維), Lin Kun-hai (林昆海), Chiang Kung-kuo (蔣功國), Lin Ruey-shing (林瑞興), Lin Da-li (林大利)
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