

BIRD COUNT

Taiwan New Year 2019 Annual Report



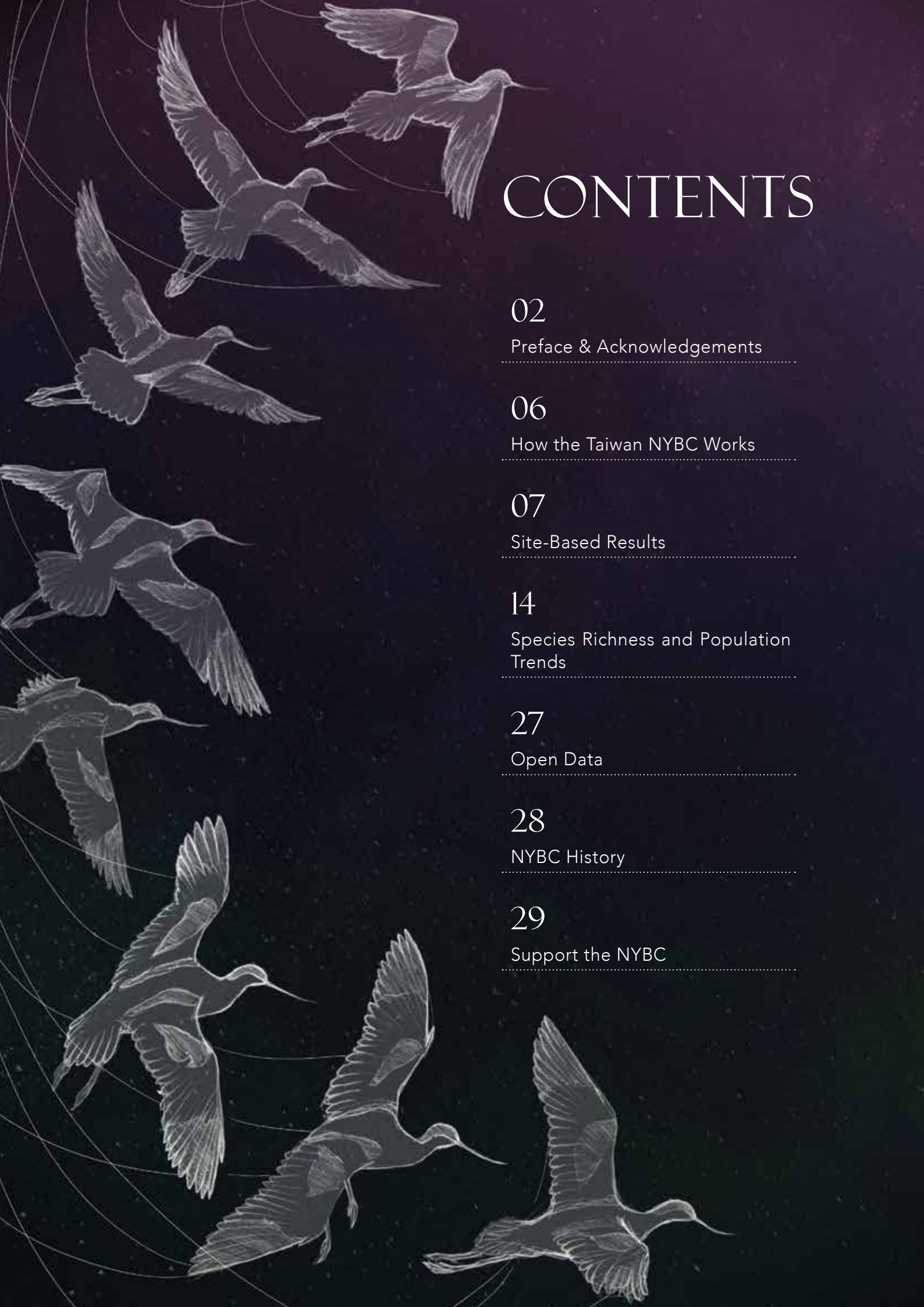
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Chinese Wild Bird Federation
Wild Bird Society of Taipei
Kaohsiung Wild Bird Society
Endemic Species Research Institute
The State of Taiwan's Birds Partnership



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Preface & Acknowledgements

Da-Li Lin

Greetings from the organizers of the Taiwan New Year Bird Count! Since 2014, this citizen science project has been used to monitor the status and population trends of migratory waterbirds in Taiwan proper and its outlying islands. This 6th report represents the results of the Taiwan NYBC 2019, conducted from December 15, 2018 to January 7, 2019. During this year's survey, 1,365 participants recorded 312,948 individuals from 325 species in 179 circle samples.

Our survey results provide valuable insight into the distribution and community composition of the wintering avifauna of Taiwan. This has importance for conservation goals along the East Asian-Australasian Flyway as it offers an in depth look at the site usage of a number of migratory bird species. As such, it will be featured in "The State of Taiwan's Birds" report which

is slated for publication in 2020. It is also shared with Wetlands International for use in the Asian Waterbird Census.

In East Asia, two major issues facing migratory bird populations are mudflat loss and coastal infrastructure projects. This is especially true for the areas bordering the Yellow Sea, Bohai Sea, and Chongming Dongtan, affecting some two million migratory birds. They rely on these areas to refuel and rest during the long journey from their breeding to wintering grounds and back again. In the case of the Yellow Sea, nearly 30% of tidal mudflats have already disappeared over the past three decades due to land reclamation and coastal development. This is no small tract of land. Coastal development in China has already reached 11,560 km, or roughly 58-61% of its coastline. It far surpasses the



Great Wall of China's length of 7,300 km and is responsible for a significant decline in mudflats. The announcement in July of 2019 that large portions of the Yellow Sea mudflats would receive World Heritage status was welcome news for the region and the flyway. This development is a massive step in the right direction towards combating these major threats to the fragile migratory bird populations that rely on coastal mudflats.

As birds don't know borders, it is of the utmost importance that information regarding population trends and site preference gets shared and discussed. Taiwan's NYBC data provides a key piece to the puzzle of understanding the situation on the ground for migratory birds in East Asia and the EAAF. As members of the global community, Taiwan will continue to do its best to monitor, share information on, and conserve the migratory birds along this major flyway.

The mascot for the 6th Taiwan NYBC was the Pied Avocet (*Recurvirostra avosetta*). NYBC data from 2014 to 2018 showed that the population of Pied Avocet wintering in Taiwan increased significantly over that period. This positive trend is quite different from that of other waterbirds surveyed. So why choose it as the NYBC 2019 mascot? Organizers agreed that while it is important to raise awareness about declining populations, it is also important to celebrate positive trends as well.

The Taiwan NYBC is organized by the Chinese Wild Bird Federation (CWB), the Wild Bird Society of Taipei (WBST), the Kaohsiung Wild Bird Society (KWBS) and the Taiwan Endemic Species Research Institute (TESRI). The organizers would like to express their deep gratitude and appreciation to all the participants, NGOs, donors, and sponsors without whom the Taiwan NYBC would not be possible. They would also like to give special thanks to Allen Lyu (CWB), Chieh Chang (CWB), Scott Pursner (CWB), Kung-Kuo Chiang (WBST), Kun-Hai Lin (KWBS), Reuy-Shing Lin (TESRI), Yong-Lun Lin (TESRI), and Da-Li Lin (TESRI) for their tireless efforts in making the Taiwan NYBC 2019 a reality.

Recommended Citation

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Dr. Richard Fuller

Professor, School of Biological Sciences
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The NYBC is an impressive example of the true power of citizen science. Your observations have helped build a clear picture of what is happening to the populations of Taiwan's birds. Among many important discoveries, you showed that pied avocets are increasing, which is wonderful news, especially since many migratory shorebirds are in rapid decline in the East Asian-Australasian Flyway. Yet your data also showed that painted snipe and long-toed stint, which share similar habitats to the avocet, are declining. Your observations are highlighting conservation successes that we can celebrate, as well as vulnerable species that need urgent help. Thank you for your valuable efforts, you are an inspiration!

A handwritten signature in black ink that reads "Richard Fuller".



**Dr. Taej Mundkur**

Senior Technical Officer, International Waterbird Census
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Monitoring the health of our environment through our birds

Our world is rapidly changing, with changing weather patterns, increasing human populations and ill effects of our rapid pace of development, resource use and mounting pollution. Against this backdrop, monitoring waterbirds, other bird species and their habitats provides us with a powerful tool to understand what is happening to our environment, based on which we can promote action for conservation of birds and nature. Such a challenge can only be met through large scale, intensive and regular monitoring by a network of volunteers committed to the cause.

The Taiwan New Year Bird Count is a shining example of monitoring network and I commend all the volunteers and coordinators in conducting the counts, summarizing and publicising the results promptly. Information collected by your counts are being fed into the annual Asian Waterbird Census that Wetlands International coordinates regionally (and globally as the International Waterbird Census). We provide this information to people and governments across the East Asian – Australasian Flyway to help prioritise conservation action for birds and wetlands. Keep up the great work.



Goals

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

How the Taiwan NYBC Works

Rules for the Taiwan NYBC are based off the basic principles set out in the Christmas Bird Count. Over the course of 23 days (with January 1st 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 comprised 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, and area searches.





Site-Based Results

Da-Li Lin, Yong-Lun Lin

From December 15, 2018 to January 7, 2019, NYBC 2019's 1,365 participants performed bird surveys at 179 sites (Fig 1, Table 1), recording 312,948 individuals from 325 species. A total of 63 of the 179 sites were located in Important Bird and Biodiversity Areas (IBAs, Fig 2).

The southwest coast and northeastern plains of Taiwan proper were hotspots in both species richness and abundance in winter (Fig 3, 4).

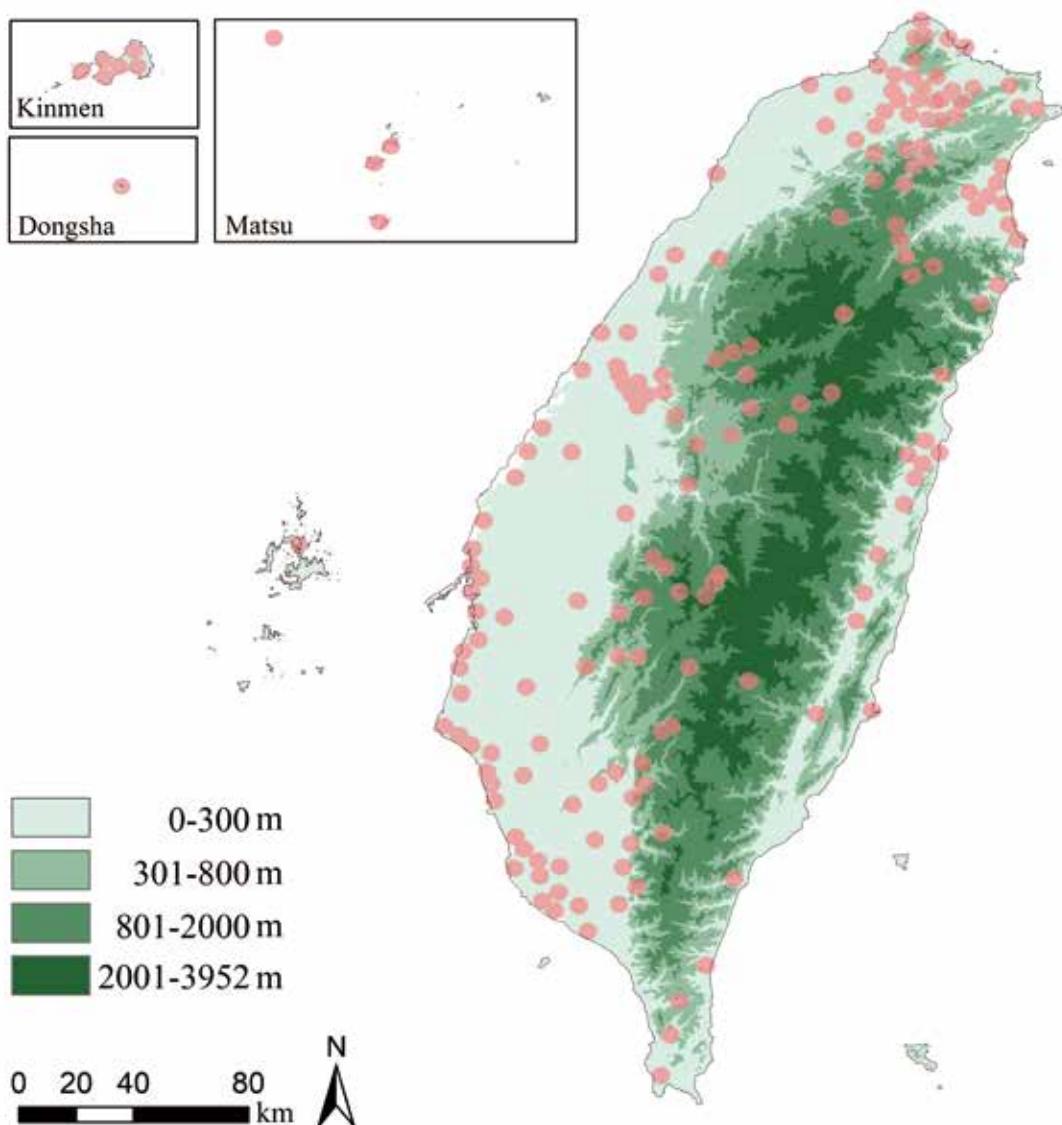


Fig 1. NYBC 2019 Site Map (credit: Yong-Lun Lin)

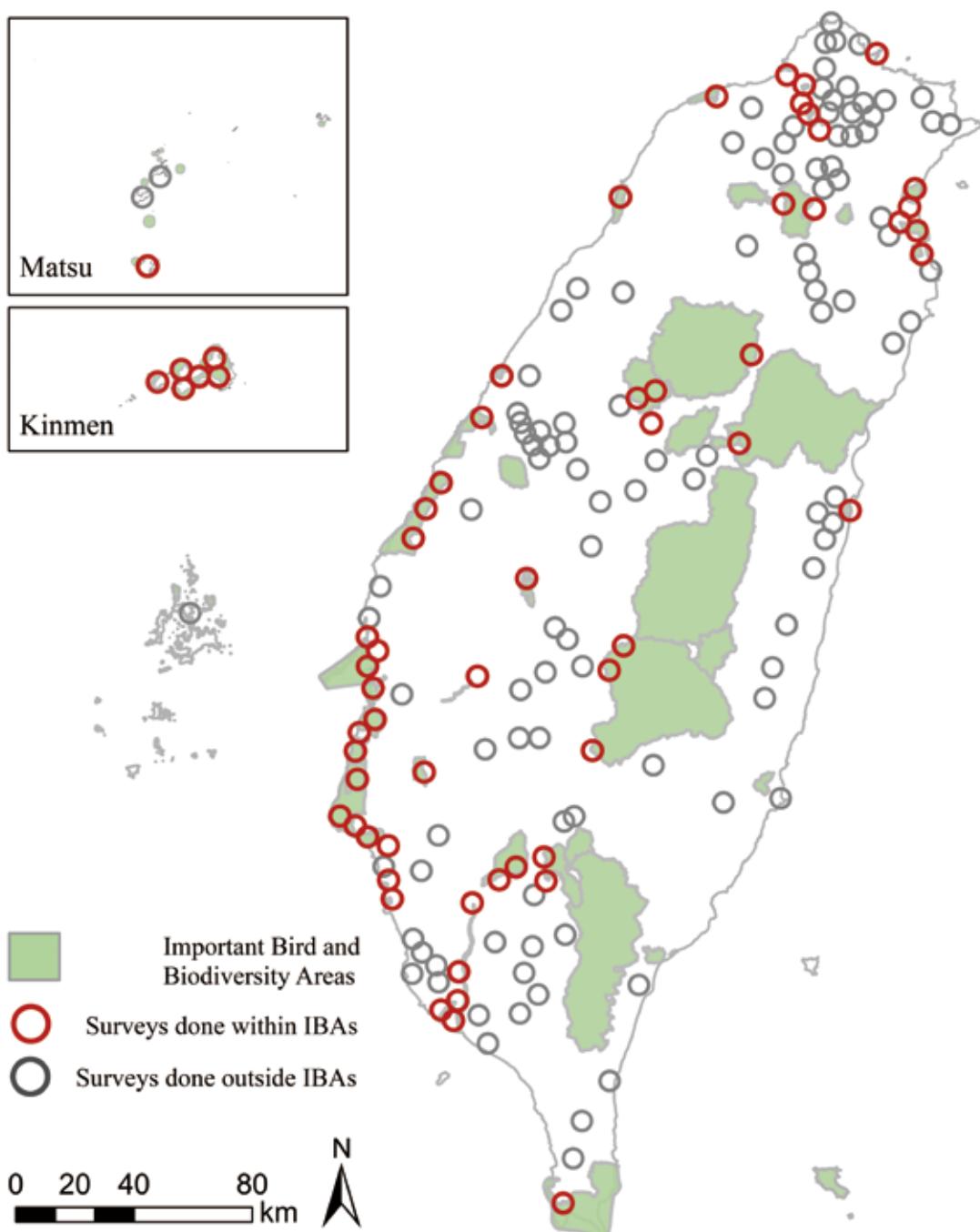


Fig. 2. NYBC 2019 Site Map highlighting surveys done in IBAs. Red circles indicate that the survey was done within an area designated as an IBA and grey circles indicate that the survey was done outside of an area designated as an IBA

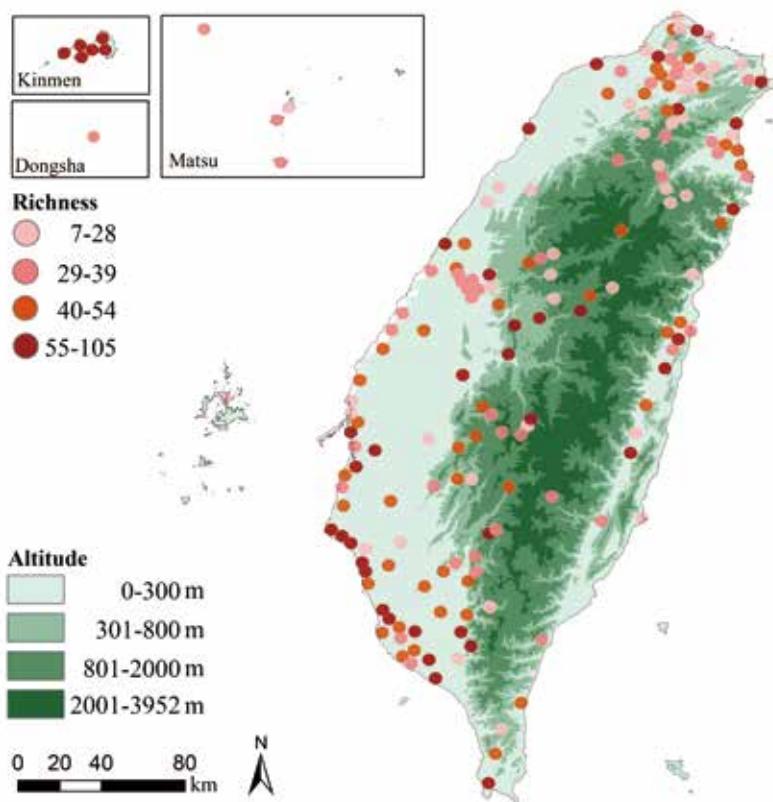


Fig 3. NYBC 2019 Bird Species Richness (credit: Yong-Lun Lin)

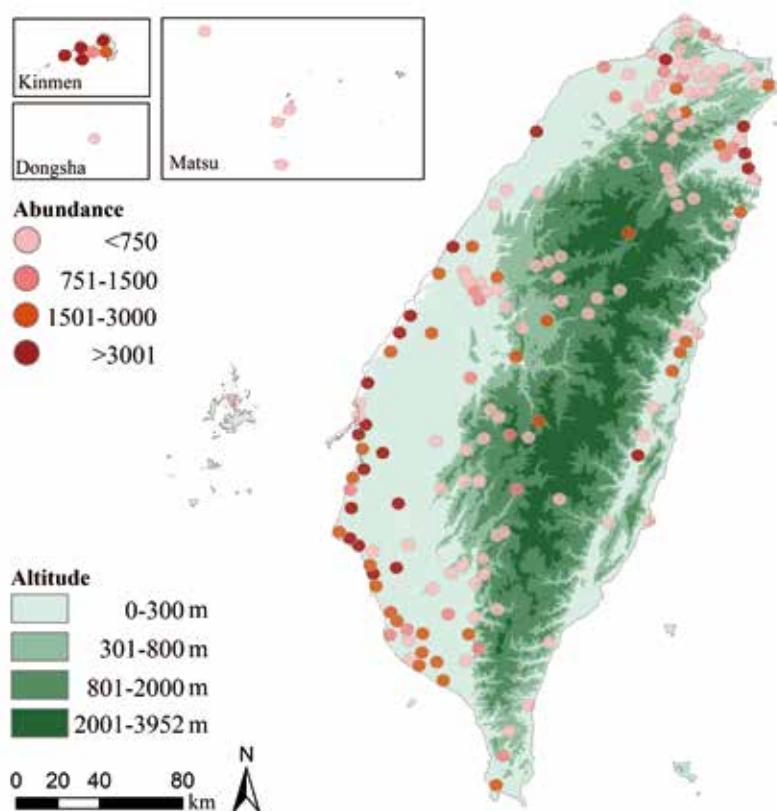


Fig 4. NYBC 2019 Bird Abundance (credit: Yong-Lun Lin)

Table 1. Site-Based Results for the Taiwan NYBC 2019

Site code	Richness	Abundance	Latitude	Longitude
#001	18	348	25.07734	121.71493
#002	47	630	25.04023	121.48229
#003	31	737	25.11032	121.52475
#004	9	49	24.97952	121.57213
#005	37	1256	25.04341	121.54371
#006	25	273	25.04380	121.61474
#007	47	1793	25.12026	121.46999
#008	39	512	25.00520	121.43720
#009	46	499	24.96003	121.41027
#010	49	1941	24.99532	121.51606
#011	24	99	25.20671	121.69052
#012	74	880	25.23291	121.63817
#013	27	313	25.14762	121.41760
#014	32	633	24.77624	121.50034
#015	23	307	24.85748	121.57389
#016	39	578	25.06962	121.64944
#017	18	155	25.08572	121.82868
#018	79	1804	24.89391	121.55346
#019	17	115	24.83296	121.52846
#020	41	412	24.99049	121.65896
#021	96	1968	25.01095	121.91307
#022	21	608	24.91577	121.34631
#023	49	623	25.23746	121.53428
#024	7	97	24.87269	121.40526
#025	52	284	24.88743	121.50819
#026	57	1253	25.08824	121.20319
#027	87	10046	24.80949	120.91090
#028	26	736	24.55551	120.78110
#029	26	277	24.54455	120.91935
#030	54	478	24.22920	120.90959
#031	34	611	24.24958	120.96235
#032	19	101	24.27008	121.01708
#033	68	4636	24.31206	120.54980
#034	40	531	24.20774	120.59836
#035	73	1603	24.17977	120.74059
#036	29	425	24.15733	120.66615
#037	32	717	24.11648	120.69368
#038	30	1922	24.19593	120.48964
#039	37	684	24.15153	120.62113
#040	34	845	24.08151	120.66403
#041	28	554	24.12733	120.74558
#042	19	107	24.17980	121.00505
#043	52	1791	24.37095	121.30983
#044	65	1649	23.99219	120.95704
#045	61	667	24.02382	121.13479

Download this table here : <http://qrgo.page.link/XX3NH>



Site code	Richness	Abundance	Latitude	Longitude
#046	54	597	24.08965	121.17439
#047	12	66	24.12404	121.27188
#048	58	1717	23.55738	120.92058
#049	87	2600	23.83621	120.82190
#050	22	193	24.07628	121.01917
#051	30	396	23.48848	120.87684
#052	34	3416	24.01385	120.36570
#053	37	3966	23.94076	120.31952
#054	41	2899	23.93888	120.45754
#055	54	5840	23.54322	120.17258
#056	56	822	23.74607	120.62585
#057	49	587	23.60846	120.71201
#058	29	234	23.57599	120.74997
#059	24	315	23.29901	120.66456
#060	25	198	23.47207	120.47639
#061	77	37988	23.35073	120.16485
#062	54	676	23.29895	120.60315
#063	35	879	23.50001	120.79584
#064	83	14100	23.50001	120.14202
#065	47	580	23.48340	120.68300
#066	69	6515	23.02065	120.14254
#067	64	5217	23.05193	120.10443
#068	53	5400	23.20270	120.31428
#069	29	159	23.26701	120.49966
#070	69	2905	23.07927	120.05829
#071	47	5279	23.18284	120.11097
#072	19	468	22.99577	120.20480
#073	24	314	23.02484	120.35746
#074	45	1633	22.84580	120.21720
#075	29	229	22.96370	120.67850
#076	38	730	22.89640	120.68450
#077	37	616	22.93560	120.59380
#078	57	2657	22.69480	120.30790
#079	51	1449	22.63477	120.27770
#080	38	584	22.61100	120.35820
#081	41	840	22.65830	120.35140
#082	55	1952	22.64040	120.41930
#083	44	1875	22.55890	120.41620
#084	45	452	22.53240	120.36540
#085	38	1587	22.50270	120.40350
#086	57	746	23.06394	120.73941
#087	46	377	22.83480	120.46047
#088	59	2831	22.73289	120.28085
#089	71	10719	22.89880	120.20600
#090	34	345	20.71052	116.72802

Site code	Richness	Abundance	Latitude	Longitude
#091	38	345	23.07853	120.77045
#092	17	63	22.74500	120.74315
#093	41	697	22.71222	120.64360
#094	76	2119	22.63746	120.61781
#095	21	244	22.52255	120.60548
#096	58	1970	22.51800	120.48000
#097	62	2283	22.43800	120.50800
#098	24	132	22.21878	120.79377
#099	104	2745	21.98563	120.73674
#100	54	1233	22.11268	120.76713
#101	48	1449	22.72418	120.52975
#102	42	525	22.85704	120.64844
#103	72	847	22.57613	120.66095
#104	21	710	24.78151	121.78967
#105	77	7660	24.83208	121.80637
#106	32	2383	24.75205	121.70316
#107	42	1195	24.73945	121.76079
#108	50	4044	24.71580	121.81255
#109	33	1143	24.70301	121.72724
#110	45	4282	24.65076	121.82714
#111	39	656	24.60457	121.85392
#112	105	1743	24.46220	121.79263
#113	39	672	23.93616	121.60917
#114	65	3795	23.41059	121.34983
#115	10	159	23.49666	121.37314
#116	42	617	23.97383	121.56496
#117	38	633	23.11759	121.22417
#118	38	221	23.22222	121.01111
#119	38	420	22.60324	120.96706
#120	15	189	23.12915	121.39793
#121	36	403	26.56178	119.61314
#122	105	16234	24.46574	118.31125
#123	79	3544	24.43103	118.23883
#124	88	4539	24.49706	118.41185
#125	75	2283	24.44600	118.42417
#126	14	68	26.21024	119.99439
#127	31	200	26.15389	119.94066
#128	33	224	25.96420	119.95628
#129	12	167	25.24179	121.56343
#130	45	613	25.11417	121.60114
#131	16	270	23.64910	119.60279
#132	13	101	25.03366	121.67835
#133	85	3546	24.41278	118.31718
#134	67	1353	24.44593	118.36503
#135	49	746	22.89977	120.54215



Site code	Richness	Abundance	Latitude	Longitude
#136	51	488	24.05136	120.78058
#137	48	398	24.40307	121.74028
#138	38	353	24.67393	121.29602
#139	30	357	25.05683	121.30963
#140	46	756	24.96049	121.25272
#141	49	2105	23.85884	120.28091
#142	22	125	25.16673	121.53163
#143	50	2191	24.31275	120.63377
#144	32	239	25.01834	121.85988
#145	40	520	23.43388	120.60722
#146	58	715	23.96053	120.84972
#147	59	15699	23.42147	120.24659
#148	39	2475	23.43884	120.15877
#149	52	2078	23.31404	120.11705
#150	39	972	23.26185	120.10512
#151	30	1558	23.85617	121.53258
#152	48	368	23.93001	121.51018
#153	49	611	23.61665	121.41624
#154	49	3167	22.92520	120.30566
#155	39	578	25.07798	121.55711
#156	49	1235	25.06896	121.46185
#157	24	151	24.97797	121.61458
#158	30	538	24.18160	120.60690
#159	32	823	24.11883	120.64407
#160	51	465	22.33182	120.87811
#161	50	3032	23.72375	120.18107
#162	14	100	23.63525	120.14691
#163	16	136	23.58192	120.14185
#164	36	588	24.52782	120.80880
#165	101	2400	23.77529	121.49863
#166	56	1563	23.90138	121.55664
#167	21	81	25.29142	121.55213
#168	8	11	24.52034	121.59050
#169	10	483	24.49439	120.73051
#170	30	287	24.60192	121.48575
#171	62	1647	22.93737	120.19146
#172	26	160	24.79060	121.40683
#173	8	39	25.05123	121.61194
#174	9	50	24.49010	121.52252
#175	22	316	24.55009	121.50415
#176	54	1189	23.26353	120.82583
#177	28	214	23.68522	120.84829
#178	17	166	24.17329	121.61743
#179	28	125	24.65046	121.47284

Species Richness and Population Trends

Da-Li Lin, Arthur Bureau, Yong-Lun Lin, Cheng-Te Hsu

The NYBC 2019 recorded 312,948 individuals from 325 species, including all of Taiwan's 29 endemics. Over 10,000 individuals were counted for the following species: Eurasian Tree Sparrow (*Passer montanus*), Kentish Plover (*Charadrius alexandrinus*), Great Cormorant (*Phalacrocorax carbo*), Dunlin (*Calidris alpina*), Northern Shoveler (*Spatula clypeata*), Black-winged Stilt (*Himantopus himantopus*), and Light-vented Bulbul (*Pycnonotus sinensis*).

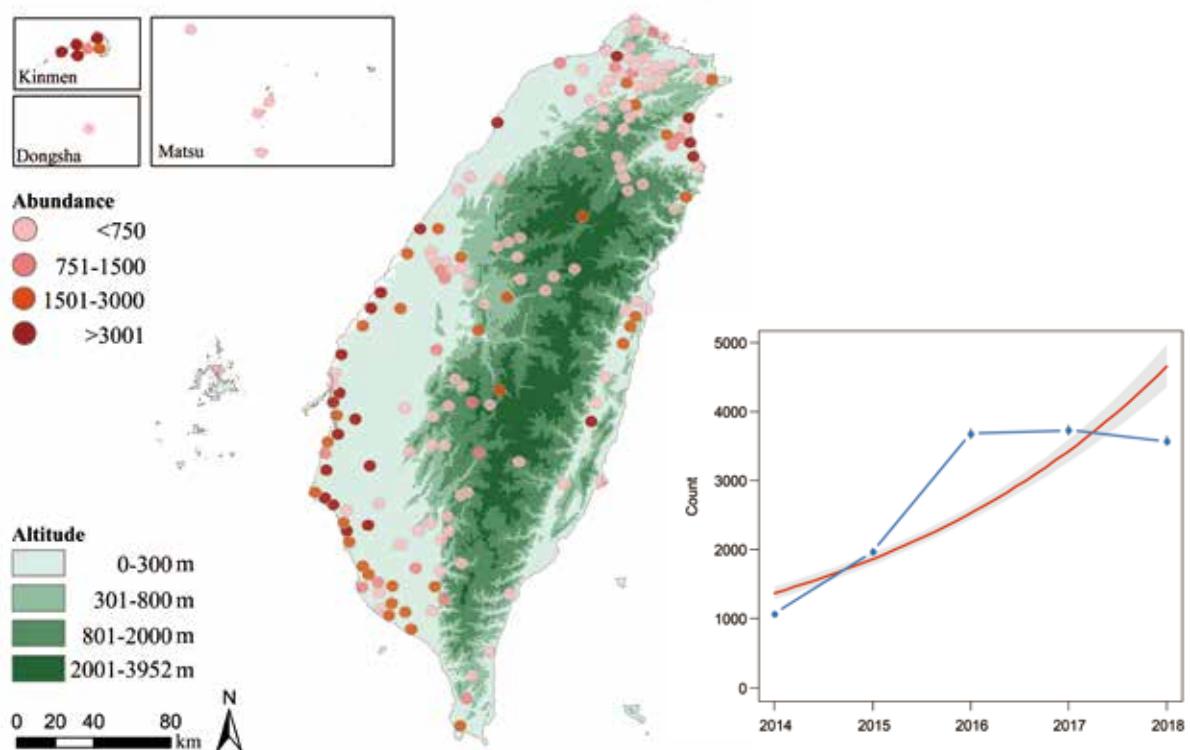
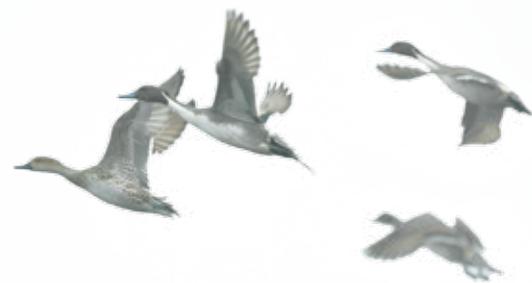


Fig 5. Distribution of Pied Avocet (*Recurvirostra avosetta*) in 2019 (credit: Yong-Lun Lin) and its population data from 2014 to 2018 (credit: Cheng-Te Hsu).



NYBC data from 2014 to 2018 showed that this year's count mascot, the Pied Avocet, experienced a wintering population increase during that period. In 2019, 4,380 individuals were recorded at a total of 23 sites (Fig 5).

The Taiwan NYBC uses an rtrim package of R 3.5.1 to examine the population trends of waterbirds, including waterfowl, shorebirds, and wintering terns. This method is sensitive to statistical significance, making it adept at detecting growth or decline in populations based on count data.

Analysis of the data collected over the last six years has led to the following findings. Taiwan NYBC data showed that populations of Greater Painted-snipe (*Rostratula benghalensis*), Long-toed Stint (*Calidris subminuta*), and Common Snipe (*Gallinago gallinago*) have decreased significantly from 2014 to 2019 (all $p < 0.05$, Fig 6). Meanwhile, populations of Eurasian Wigeon (*Mareca penelope*), Eastern Spot-billed Duck (*Anas zonorhyncha*), Northern Shoveler (*Spatula clypeata*), Northern Pintail (*Spatula acuta*), Tufted Duck (*Aythya fuligula*), Great Egret (*Ardea alba*), Intermediate Egret (*Ardea intermedia*), Little Egret (*Egretta garzetta*), Eurasian Coot (*Fulica atra*), Red-necked Stint (*Calidris ruficollis*), and Black-headed Gull (*Chroicocephalus ridibundus*) increased significantly between 2014 and 2019 (all $p < 0.05$, Fig 7-8).

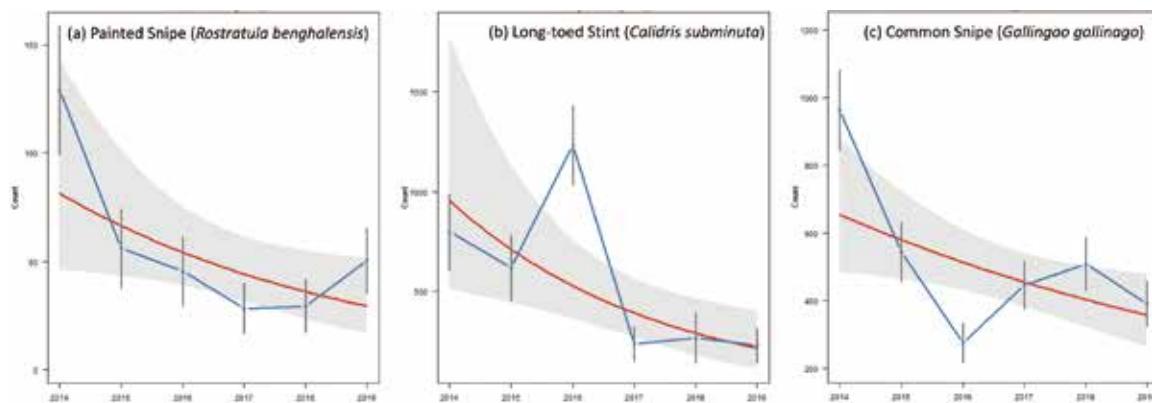


Fig 6. Taiwan NYBC data for Greater Painted-snipe (*Rostratula benghalensis*), Long-toed Stint (*Calidris subminuta*), and Common Snipe (*Gallinago gallinago*). All show significant decreases during the period between 2014 and 2019 (all $p < 0.05$, credit: Arthur Bureau).

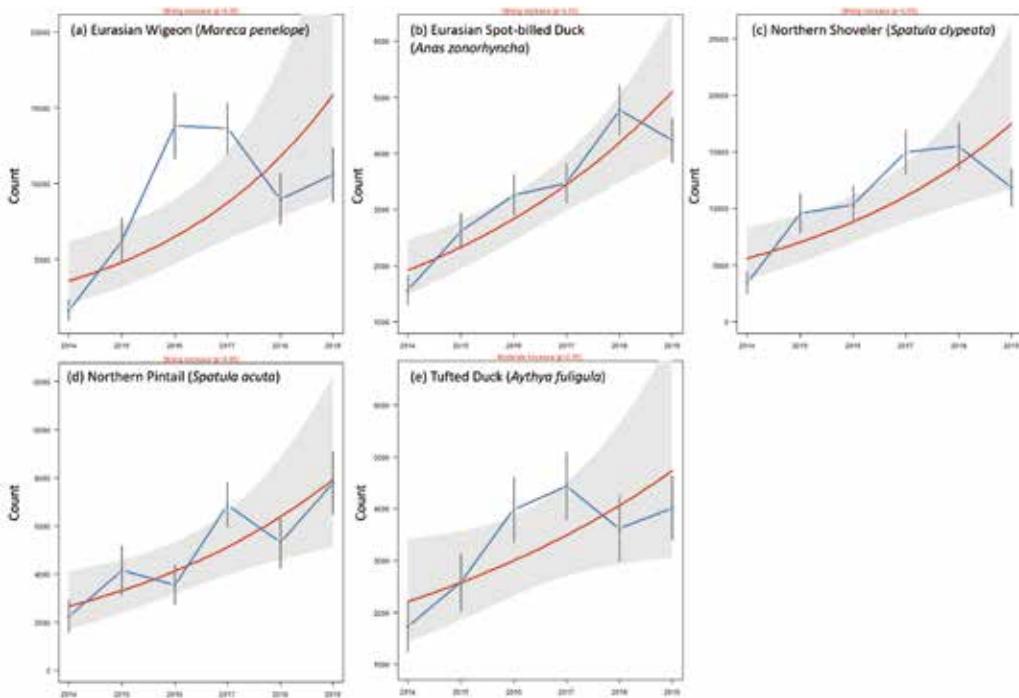


Fig 7. Taiwan NYBC data for Eurasian Wigeon (*Mareca penelope*), Eastern Spot-billed Duck (*Anas zonorhyncha*), Northern Shoveler (*Spatula clypeata*), Northern Pintail (*Spatula acuta*), and Tufted Duck (*Aythya fuligula*). All show significant increases during the period between 2014 and 2019 (all $p < 0.05$, credit: Arthur Bureau).

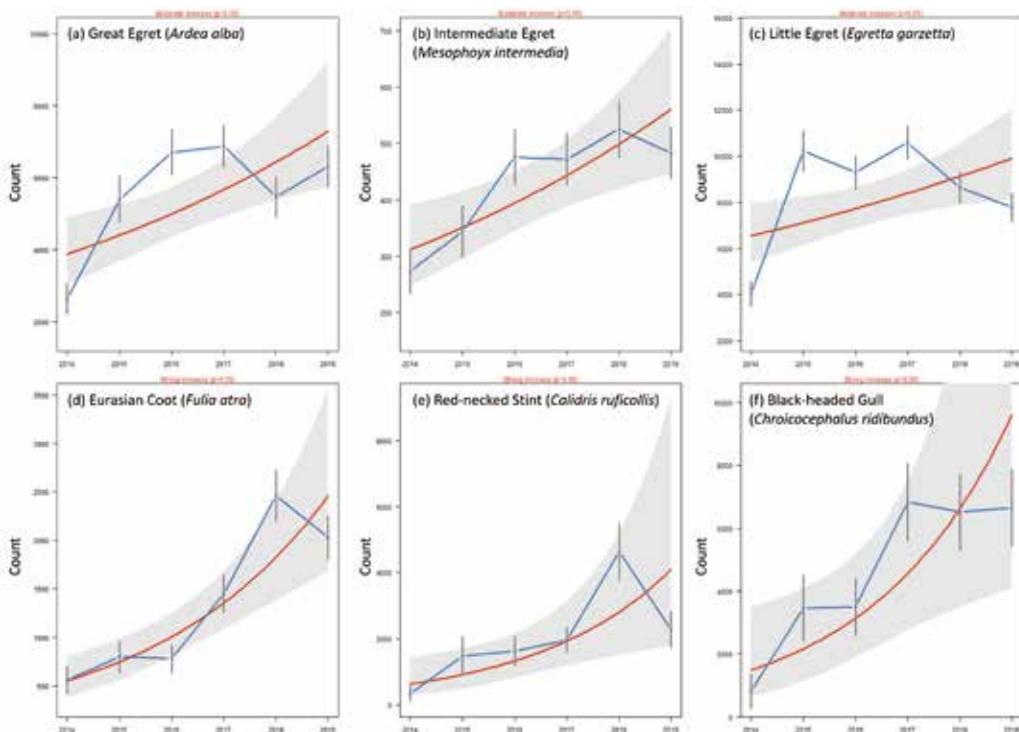


Fig 8. Taiwan NYBC data for Great Egret (*Ardea alba*), Intermediate Egret (*Ardea intermedia*), Little Egret (*Egretta garzetta*), Eurasian Coot (*Fulica atra*), Red-necked stint (*Calidris ruficollis*), and Black-headed Gull (*Chroicocephalus ridibundus*). All show significant increases during the period between 2014 and 2019 (all $p < 0.05$, credit: Arthur Bureau).

**Table 2. 2014-2019 NYBC Data by Species**

Scientific Name	Common Name	2014	2015	2016	2017	2018	2019
<i>Anser cygnoides</i>	Swan Goose	1	0	0	0	0	0
<i>Anser fabalis</i>	Taiga Bean-Goose	0	1	14	7	0	0
<i>Anser serrirostris</i>	Tundra Bean-Goose	6	7	0	0	0	0
<i>Anser albifrons</i>	Greater White-fronted Goose	0	7	0	0	0	0
<i>Anser anser</i>	Graylag Goose	0	0	0	0	0	2
<i>Cygnus columbianus</i>	Tundra Swan	0	0	0	1	0	0
<i>Tadorna ferruginea</i>	Ruddy Shelduck	0	0	16	0	2	2
<i>Tadorna tadorna</i>	Common Shelduck	1	10	2	4	9	2
<i>Nettapus coromandelianus</i>	Cotton Pygmy-Goose	0	0	0	0	0	1
<i>Aix galericulata</i>	Mandarin Duck	15	40	12	22	9	12
<i>Anas strepera</i>	Gadwall	59	84	42	139	61	96
<i>Anas falcata</i>	Falcated Duck	6	40	8	34	18	18
<i>Anas penelope</i>	Eurasian Wigeon	3721	3848	10334	12237	6860	8190
<i>Anas platyrhynchos</i>	Mallard	194	155	146	66	94	147
<i>Anas zonorhyncha</i>	Eastern Spot-billed Duck	2560	2349	2866	3400	4177	4132
<i>Anas luzonica</i>	Philippine Duck	1	2	0	0	0	0
<i>Anas clypeata</i>	Northern Shoveler	6565	7388	9663	14103	14193	11609
<i>Anas acuta</i>	Northern Pintail	3387	2392	2600	6446	3760	5759
<i>Anas querquedula</i>	Garganey	54	68	149	146	49	11
<i>Anas formosa</i>	Baikal Teal	0	0	2	0	3	1
<i>Anas crecca</i>	Green-winged Teal	8646	6609	7239	6844	6829	7229
<i>Aythya ferina</i>	Common Pochard	13	158	65	174	39	21
<i>Aythya baeri</i>	Baer's Pochard	0	0	0	0	1	0
<i>Aythya nyroca</i>	Ferruginous Duck	0	2	1	1	0	1
<i>Aythya fuligula</i>	Tufted Duck	2180	2179	3909	4420	3308	4014
<i>Aythya marila</i>	Greater Scaup	11	16	26	37	2	40
<i>Clangula hyemalis</i>	Long-tailed Duck	1	0	0	0	0	0
<i>Bucephala clangula</i>	Common Goldeneye	0	1	0	0	0	0
<i>Mergus albellus</i>	Smew	1	0	0	0	0	0
<i>Mergus merganser</i>	Common Merganser	0	0	0	1	0	0
<i>Mergus serrator</i>	Red-breasted Merganser	0	0	0	4	0	0
<i>Mergus squamatus</i>	Scaly-sided Merganser	0	1	1	0	0	0
<i>Coturnix japonica</i>	Japanese Quail	1	2	1	2	1	0
<i>Arborophila crudigularis</i>	Taiwan Partridge	34	37	50	61	74	94
<i>Bambusicola sonorivox</i>	Taiwan Bamboo-Partridge	181	167	217	247	207	301
<i>Lophura swinhoii</i>	Swinhoe's Pheasant	32	15	7	30	17	12
<i>Syrmaticus mikado</i>	Mikado Pheasant	0	4	2	1	0	3
<i>Phasianus colchicus</i>	Ring-necked Pheasant	72	53	56	103	137	86
<i>Tachybaptus ruficollis</i>	Little Grebe	922	825	888	1308	1242	1259

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Scientific Name	Common Name	2014	2015	2016	2017	2018	2019
<i>Podiceps cristatus</i>	Great Crested Grebe	10	22	1	60	125	33
<i>Podiceps nigricollis</i>	Eared Grebe	4	7	0	2	5	5
<i>Calonectris leucomelas</i>	Streaked Shearwater	0	3	0	0	0	0
<i>Ciconia nigra</i>	Black Stork	0	0	2	1	0	0
<i>Ciconia boyciana</i>	Oriental Stork	0	3	1	2	0	0
<i>Phalacrocorax carbo</i>	Great Cormorant	8355	9489	4380	8705	15494	18473
<i>Phalacrocorax capillatus</i>	Japanese Cormorant	2	0	18	23	17	1
<i>Pelecanus crispus</i>	Dalmatian Pelican	0	0	0	0	0	4
<i>Botaurus stellaris</i>	Great Bittern	0	1	3	2	2	1
<i>Ixobrychus sinensis</i>	Yellow Bittern	53	87	68	70	84	49
<i>Ixobrychus eurhythmus</i>	Schrenck's Bittern	0	1	0	0	1	0
<i>Ixobrychus cinnamomeus</i>	Cinnamon Bittern	17	36	19	33	21	17
<i>Ardea cinerea</i>	Gray Heron	4541	5036	6783	5536	5671	5483
<i>Ardea purpurea</i>	Purple Heron	15	48	23	31	17	24
<i>Ardea alba</i>	Great Egret	2795	3762	5971	6548	4976	5969
<i>Mesophoyx intermedia</i>	Intermediate Egret	275	261	421	463	458	468
<i>Egretta eulophotes</i>	Chinese Egret	0	5	6	14	0	0
<i>Egretta garzetta</i>	Little Egret	4686	7111	8372	10210	8077	7601
<i>Egretta sacra</i>	Pacific Reef-Heron	5	76	13	7	9	14
<i>Bubulcus ibis</i>	Cattle Egret	3479	1783	3331	3500	3679	3712
<i>Ardeola bacchus</i>	Chinese Pond-Heron	22	39	46	70	43	32
<i>Butorides striata</i>	Striated Heron	16	13	16	26	26	17
<i>Nycticorax nycticorax</i>	Black-crowned Night-Heron	2171	2664	3060	3324	3114	2555
<i>Gorsachius melanoleucus</i>	Malayan Night-Heron	36	55	52	69	90	63
<i>Threskiornis aethiopicus</i>	Sacred Ibis	431	771	1176	1173	1256	1374
<i>Platalea leucorodia</i>	Eurasian Spoonbill	6	16	4	9	17	10
<i>Platalea minor</i>	Black-faced Spoonbill	819	1251	1373	1454	1947	2009
<i>Pandion haliaetus</i>	Osprey	103	139	158	207	194	186
<i>Elanus caeruleus</i>	Black-shouldered Kite	40	61	80	93	130	132
<i>Pernis ptilorhynchus</i>	Oriental Honey-buzzard	31	10	53	53	59	59
<i>Aviceda leuphotes</i>	Black Baza	0	0	0	0	0	1
<i>Spilornis cheela</i>	Crested Serpent-Eagle	203	161	213	365	240	218
<i>Nisaetus nipalensis</i>	Mountain Hawk-Eagle	1	2	2	4	10	19
<i>Ictinaetus malaiensis</i>	Black Eagle	34	20	32	28	22	49
<i>Clanga clanga</i>	Greater Spotted Eagle	1	1	0	0	0	1
<i>Aquila heliaca</i>	Imperial Eagle	0	0	0	0	1	0
<i>Butastur indicus</i>	Gray-faced Buzzard	8	5	7	6	2	4
<i>Circus spilonotus</i>	Eastern Marsh-Harrier	0	4	4	5	22	8
<i>Circus cyaneus</i>	Northern Harrier	0	2	1	1	0	0
<i>Circus melanoleucos</i>	Pied Harrier	0	2	0	0	0	0
<i>Accipiter trivirgatus</i>	Crested Goshawk	89	86	116	146	111	98





Scientific Name	Common Name	2014	2015	2016	2017	2018	2019
<i>Accipiter gularis</i>	Japanese Sparrowhawk	0	2	3	5	5	2
<i>Accipiter virgatus</i>	Besra	16	22	23	32	19	19
<i>Accipiter nisus</i>	Eurasian Sparrowhawk	2	1	2	2	6	3
<i>Accipiter gentilis</i>	Northern Goshawk	1	0	1	1	1	0
<i>Milvus migrans</i>	Black Kite	144	134	204	227	221	273
<i>Haliaeetus leucogaster</i>	White-bellied Sea-Eagle	2	0	0	0	0	0
<i>Haliaeetus albicilla</i>	White-tailed Eagle	1	0	0	0	0	1
<i>Buteo japonicus</i>	Eastern Buzzard	0	0	0	0	0	49
<i>Buteo hemilasius</i>	Upland Buzzard	0	0	1	0	0	0
<i>Rallina eurizonoides</i>	Slaty-legged Crake	1	0	0	0	0	0
<i>Gallirallus striatus</i>	Slaty-breasted Rail	0	4	4	0	4	1
<i>Rallus indicus</i>	Brown-cheeked Rail	0	5	0	0	0	5
<i>Amaurornis phoenicurus</i>	White-breasted Waterhen	73	200	172	226	342	217
<i>Zapornia fusca</i>	Ruddy-breasted Crake	9	31	13	14	16	8
<i>Porphyrio indicus</i>	Black-backed Swamphen	0	0	1	0	0	0
<i>Gallinula chloropus</i>	Eurasian Moorhen	3098	3271	3722	3514	2984	3384
<i>Fulica atra</i>	Eurasian Coot	452	620	748	1448	2330	2023
<i>Grus japonensis</i>	Red-crowned Crane	0	0	1	0	0	0
<i>Leucogeranus leucogeranus</i>	Siberian Crane	0	1	1	0	0	58
<i>Himantopus himantopus</i>	Black-winged Stilt	9416	8424	10742	10772	11207	12283
<i>Recurvirostra avosetta</i>	Pied Avocet	848	1192	3552	3729	3570	4380
<i>Haematopus ostralegus</i>	Eurasian Oystercatcher	0	36	9	96	16	130
<i>Pluvialis squatarola</i>	Black-bellied Plover	498	354	885	638	479	895
<i>Pluvialis fulva</i>	Pacific Golden-Plover	5721	3898	7150	7047	3031	3210
<i>Vanellus vanellus</i>	Northern Lapwing	259	164	182	134	178	100
<i>Vanellus cinereus</i>	Gray-headed Lapwing	1	0	0	0	1	1
<i>Charadrius mongolus</i>	Lesser Sand-Plover	98	317	84	261	246	156
<i>Charadrius leschenaultii</i>	Greater Sand-Plover	225	44	344	100	131	350
<i>Charadrius alexandrinus</i>	Kentish Plover	12155	10363	26753	26995	18998	16908
<i>Charadrius hiaticula</i>	Common Ringed Plover	0	0	0	1	1	0
<i>Charadrius placidus</i>	Long-billed Plover	1	1	0	1	0	0
<i>Charadrius dubius</i>	Little Ringed Plover	1223	1083	1639	2222	1287	1280
<i>Rostratula benghalensis</i>	Greater Painted-snipe	100	46	39	28	27	50
<i>Hydrophasianus chirurgus</i>	Pheasant-tailed Jacana	285	391	380	257	40	281
<i>Xenus cinereus</i>	Terek Sandpiper	0	1	3	2	158	8
<i>Actitis hypoleucos</i>	Common Sandpiper	399	411	500	622	544	424
<i>Tringa ochropus</i>	Green Sandpiper	60	95	97	77	94	101
<i>Tringa brevipes</i>	Gray-tailed Tattler	2	19	22	33	527	57
<i>Tringa erythropus</i>	Spotted Redshank	11	7	1	17	20	47
<i>Tringa nebularia</i>	Common Greenshank	2160	1464	2271	2308	1792	1342
<i>Tringa flavipes</i>	Lesser Yellowlegs	0	0	0	0	0	1



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<i>Tringa stagnatilis</i>	Marsh Sandpiper	431	332	663	630	817	784
<i>Tringa glareola</i>	Wood Sandpiper	2033	1522	1687	1663	1669	1225
<i>Tringa totanus</i>	Common Redshank	275	313	484	535	289	434
<i>Numenius minutus</i>	Little Curlew	0	1	0	0	0	0
<i>Numenius phaeopus</i>	Whimbrel	3	10	91	202	36	47
<i>Numenius madagascariensis</i>	Far Eastern Curlew	0	4	0	14	2	1
<i>Numenius arquata</i>	Eurasian Curlew	779	1767	1627	2254	950	713
<i>Limosa limosa</i>	Black-tailed Godwit	8	5	19	164	202	142
<i>Limosa lapponica</i>	Bar-tailed Godwit	3	2	5	0	2	6
<i>Arenaria interpres</i>	Ruddy Turnstone	814	1004	1405	632	458	1145
<i>Calidris tenuirostris</i>	Great Knot	0	6	6	86	6	14
<i>Calidris canutus</i>	Red Knot	0	0	1	73	201	1
<i>Calidris pugnax</i>	Ruff	3	4	2	6	10	5
<i>Calidris falcinellus</i>	Broad-billed Sandpiper	47	0	6	3	3	2
<i>Calidris acuminata</i>	Sharp-tailed Sandpiper	2	5	3	5	30	0
<i>Calidris ferruginea</i>	Curlew Sandpiper	0	1	0	14	1	67
<i>Calidris temminckii</i>	Temminck's Stint	2	23	1	6	3	3
<i>Calidris subminuta</i>	Long-toed Stint	604	481	1219	239	149	231
<i>Calidris pygmea</i>	Spoon-billed Sandpiper	0	0	0	0	1	0
<i>Calidris ruficollis</i>	Red-necked Stint	504	530	1169	1770	3330	1652
<i>Calidris alba</i>	Sanderling	307	116	220	92	108	162
<i>Calidris alpina</i>	Dunlin	12953	9817	13091	17646	15003	14250
<i>Calidris minuta</i>	Little Stint	0	0	0	2	5	0
<i>Limnodromus scolopaceus</i>	Long-billed Dowitcher	3	2	0	2	1	1
<i>Gallinago gallinago</i>	Common Snipe	1040	470	264	441	486	388
<i>Gallinago stenura</i>	Pin-tailed Snipe	2	0	0	0	0	0
<i>Gallinago megala</i>	Swinhoe's Snipe	1	0	14	0	0	0
<i>Scolopax rusticola</i>	Eurasian Woodcock	0	3	5	3	9	4
<i>Phalaropus fulicarius</i>	Red Phalarope	2	0	0	0	0	0
<i>Turnix suscitator</i>	Barred Buttonquail	1	19	14	8	8	5
<i>Glareola maldivarum</i>	Oriental Pratincole	0	0	2	4	1	0
<i>Saundersilarus saundersi</i>	Saunders's Gull	82	24	100	136	84	11
<i>Chroicocephalus ridibundus</i>	Black-headed Gull	3272	2544	3281	6648	6433	6580
<i>Ichthyaetus ichthyaetus</i>	Pallas's Gull	0	0	0	0	1	0
<i>Larus crassirostris</i>	Black-tailed Gull	23	4	5	1	13	17
<i>Larus argentatus</i>	Herring Gull	69	105	55	225	69	129
<i>Larus fuscus</i>	Lesser Black-backed Gull	1	1	52	14	1	1
<i>Larus schistisagus</i>	Slaty-backed Gull	0	1	0	0	68	0
<i>Sternula albifrons</i>	Little Tern	32	2	173	56	56	97
<i>Gelochelidon nilotica</i>	Gull-billed Tern	0	31	0	6	8	3
<i>Hydroprogne caspia</i>	Caspian Tern	732	688	1023	965	2170	1780





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<i>Chlidonias leucopterus</i>	White-winged Tern	45	0	30	1	1	12
<i>Chlidonias hybrida</i>	Whiskered Tern	945	805	8620	4317	12236	6441
<i>Sterna hirundo</i>	Common Tern	0	0	1	0	0	0
<i>Thalasseus bergii</i>	Great Crested Tern	0	0	0	0	5	0
<i>Columba livia</i>	Rock Pigeon	1672	2808	4035	5732	4970	5714
<i>Columba pulchricollis</i>	Ashy Wood-Pigeon	214	79	130	470	749	400
<i>Streptopelia orientalis</i>	Oriental Turtle-Dove	638	517	1039	1026	1042	825
<i>Streptopelia tranquebarica</i>	Red Collared-Dove	4668	5405	6658	10288	7932	9488
<i>Streptopelia chinensis</i>	Spotted Dove	1056	1862	2557	3347	2873	3686
<i>Chalcophaps indica</i>	Asian Emerald Dove	22	22	15	14	22	16
<i>Treron sieboldii</i>	White-bellied Pigeon	158	92	97	109	97	111
<i>Treron formosae</i>	Whistling Green-Pigeon	6	41	17	59	84	42
<i>Ptilinopus leclancheri</i>	Black-chinned Fruit-Dove	0	1	0	0	0	0
<i>Cacomantis merulinus</i>	Plaintive Cuckoo	0	0	0	1	0	0
<i>Eudynamys scolopaceus</i>	Asian Koel	0	0	0	6	0	0
<i>Centropus sinensis</i>	Greater Coucal	0	19	24	18	38	25
<i>Centropus bengalensis</i>	Lesser Coucal	12	19	21	18	24	15
<i>Tyto longimembris</i>	Australasian Grass-Owl	0	2	0	0	0	0
<i>Otus spilocephalus</i>	Mountain Scops-Owl	10	10	18	42	10	31
<i>Otus lettia</i>	Collared Scops-Owl	20	22	14	31	11	11
<i>Otus elegans</i>	Ryukyu Scops-Owl	0	0	2	0	0	0
<i>Otus sunia</i>	Oriental Scops-Owl	0	0	0	0	0	1
<i>Ketupa flavipes</i>	Tawny Fish-Owl	0	0	0	1	1	0
<i>Glaucidium brodiei</i>	Collared Owlet	5	4	4	2	3	8
<i>Strix leptogrammica</i>	Brown Wood-Owl	0	1	3	1	0	1
<i>Strix nivicolum</i>	Himalayan Owl	2	1	4	2	2	3
<i>Asio otus</i>	Long-eared Owl	0	0	0	1	0	1
<i>Asio flammeus</i>	Short-eared Owl	0	0	1	3	0	0
<i>Ninox japonica</i>	Northern Boobook	3	3	1	1	2	5
<i>Caprimulgus affinis</i>	Savannah Nightjar	0	0	0	0	0	23
<i>Hirundapus caudacutus</i>	White-throated Needletail	0	0	0	1	6	0
<i>Hirundapus cochinchinensis</i>	Silver-backed Needletail	0	0	1	0	2	0
<i>Aerodramus brevirostris</i>	Himalayan Swiftlet	0	0	2	0	0	0
<i>Apus pacificus</i>	Pacific Swift	23	1	3	0	0	9
<i>Apus nipalensis</i>	House Swift	2325	2236	2391	1825	3732	2144
<i>Alcedo atthis</i>	Common Kingfisher	236	267	317	357	360	334
<i>Halcyon smyrnensis</i>	White-throated Kingfisher	3	9	20	25	42	35
<i>Halcyon pileata</i>	Black-capped Kingfisher	0	1	0	0	0	0
<i>Todiramphus chloris</i>	Collared Kingfisher	0	0	1	1	0	0
<i>Ceryle rudis</i>	Pied Kingfisher	4	11	10	12	21	24
<i>Upupa epops</i>	Eurasian Hoopoe	3	35	92	34	44	84



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<i>Psilopogon nuchalis</i>	Taiwan Barbet	351	434	425	384	460	604
<i>Jynx torquilla</i>	Eurasian Wryneck	0	0	2	4	1	3
<i>Dendrocops canicapillus</i>	Gray-capped Woodpecker	191	163	237	196	239	265
<i>Dendrocops leucotos</i>	White-backed Woodpecker	9	9	7	7	7	7
<i>Picus canus</i>	Gray-faced Woodpecker	0	0	3	0	4	3
<i>Falco tinnunculus</i>	Eurasian Kestrel	64	64	86	76	77	74
<i>Falco subbuteo</i>	Eurasian Hobby	2	0	4	1	1	1
<i>Falco peregrinus</i>	Peregrine Falcon	20	31	38	30	50	35
<i>Pericrocotus solaris</i>	Gray-chinned Minivet	578	567	605	391	939	673
<i>Pericrocotus divaricatus</i>	Ashy Minivet	0	0	6	22	23	32
<i>Coracina macei</i>	Large Cuckooshrike	0	2	0	0	5	1
<i>Lalage melaschistos</i>	Black-winged Cuckooshrike	0	1	4	2	8	12
<i>Lanius bucephalus</i>	Bull-headed Shrike	0	0	2	2	3	1
<i>Lanius collurio</i>	Red-backed Shrike	0	0	1	0	0	0
<i>Lanius cristatus</i>	Brown Shrike	684	767	765	971	862	633
<i>Lanius schach</i>	Long-tailed Shrike	178	219	243	356	346	349
<i>Lanius sphenocercus</i>	Chinese Gray Shrike	1	0	0	1	0	1
<i>Erpornis zantholeuca</i>	White-bellied Erpornis	237	186	255	278	226	389
<i>Oriolus chinensis</i>	Black-naped Oriole	8	15	10	24	18	25
<i>Oriolus traillii</i>	Maroon Oriole	48	29	33	63	70	71
<i>Dicrurus macrocercus</i>	Black Drongo	937	933	1063	1441	1429	1195
<i>Dicrurus leucophaeus</i>	Ashy Drongo	2	1	0	3	4	0
<i>Dicrurus aeneus</i>	Bronzed Drongo	241	216	300	277	260	308
<i>Dicrurus hottentottus</i>	Hair-crested Drongo	0	1	0	10	3	4
<i>Hypothymis azurea</i>	Black-naped Monarch	412	307	414	387	343	481
<i>Terpsiphone atrocaudata</i>	Japanese Paradise-Flycatcher	0	0	0	0	0	2
<i>Garrulus glandarius</i>	Eurasian Jay	75	92	26	21	43	81
<i>Cyanopica cyanus</i>	Azure-winged Magpie	1	36	52	5	13	17
<i>Urocissa caerulea</i>	Taiwan Blue-Magpie	238	155	272	286	422	353
<i>Dendrocitta formosae</i>	Gray Treepie	824	846	1082	876	1074	1130
<i>Pica pica</i>	Eurasian Magpie	571	678	941	1043	998	1022
<i>Nucifraga caryocatactes</i>	Eurasian Nutcracker	35	15	47	29	16	16
<i>Corvus splendens</i>	House Crow	0	0	0	0	1	0
<i>Corvus frugilegus</i>	Rook	4	0	1	0	2	3
<i>Corvus corone</i>	Carrion Crow	0	0	0	0	0	2
<i>Corvus macrorhynchos</i>	Large-billed Crow	201	206	325	148	228	356
<i>Corvus torquatus</i>	Collared Crow	2	16	35	38	51	51
<i>Alauda arvensis</i>	Eurasian Skylark	22	12	7	5	13	474
<i>Alauda gulgula</i>	Oriental Skylark	214	97	223	292	249	366
<i>Riparia chinensis</i>	Gray-throated Martin	2688	1522	1801	1026	2025	2372
<i>Riparia riparia</i>	Bank Swallow	2	0	5	1	4	0





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<i>Hirundo rustica</i>	Barn Swallow	2586	2189	3217	2462	2782	2566
<i>Hirundo tahitica</i>	Pacific Swallow	2318	2628	4671	3404	3972	2814
<i>Cecropis daurica</i>	Red-rumped Swallow	8	15	9	6	11	3
<i>Cecropis striolata</i>	Striated Swallow	1366	1494	2557	2513	4005	2233
<i>Delichon dasypus</i>	Asian House-Martin	531	484	937	663	338	540
<i>Sittiparus castaneoventris</i>	Chestnut-bellied Tit	45	36	15	23	213	169
<i>Periparus ater</i>	Coal Tit	14	141	59	48	27	21
<i>Parus minor</i>	Japanese Tit	0	0	0	1	0	0
<i>Parus monticolus</i>	Green-backed Tit	156	202	255	209	190	334
<i>Machlolophus holsti</i>	Yellow Tit	62	56	93	31	46	72
<i>Remiz consobrinus</i>	Chinese Penduline-Tit	0	0	11	27	6	40
<i>Aegithalos concinnus</i>	Black-throated Tit	981	978	700	622	605	936
<i>Sitta europaea</i>	Eurasian Nuthatch	46	46	78	34	48	78
<i>Troglodytes troglodytes</i>	Eurasian Wren	7	16	17	4	16	29
<i>Cinclus pallasi</i>	Brown Dipper	20	24	20	15	16	25
<i>Spizixos semitorques</i>	Collared Finchbill	199	243	212	269	211	207
<i>Pycnonotus taivanus</i>	Styan's Bulbul	1045	847	823	1557	976	1678
<i>Pycnonotus sinensis</i>	Light-vented Bulbul	7692	8450	10026	10224	11082	10669
<i>Hypsipetes leucocephalus</i>	Black Bulbul	2880	3437	3359	3580	4070	5416
<i>Hypsipetes amaurotis</i>	Brown-eared Bulbul	10	1	44	3	3	0
<i>Hemixos castanonotus</i>	Chestnut Bulbul	0	0	3	0	0	0
<i>Regulus goodfellowi</i>	Flamecrest	14	88	140	79	88	52
<i>Pnoepyga formosana</i>	Taiwan Cupwing	25	27	80	30	24	18
<i>Urosphena squameiceps</i>	Asian Stubtail	1	1	0	1	9	6
<i>Abroscopus albogularis</i>	Rufous-faced Warbler	250	214	456	310	310	465
<i>Horornis diphone</i>	Japanese Bush-Warbler	2	1	9	3	6	6
<i>Horornis borealis</i>	Manchurian Bush-Warbler	23	42	54	61	68	54
<i>Horornis fortipes</i>	Brownish-flanked Bush-Warbler	8	10	34	21	15	29
<i>Horornis acanthizoides</i>	Yellowish-bellied Bush-Warbler	14	31	39	17	19	23
<i>Phylloscopus fuscatus</i>	Dusky Warbler	17	30	56	90	79	169
<i>Phylloscopus armandii</i>	Yellow-streaked Warbler	0	0	0	1	0	0
<i>Phylloscopus schwarzi</i>	Radde's Warbler	0	0	1	1	0	0
<i>Phylloscopus proregulus</i>	Pallas's Leaf Warbler	4	33	49	24	8	26
<i>Phylloscopus inornatus</i>	Yellow-browed Warbler	69	56	243	218	92	338
<i>Phylloscopus humei</i>	Hume's Leaf Warbler	0	0	0	0	0	1
<i>Phylloscopus borealis</i>	Arctic Warbler	119	84	155	288	226	206
<i>Phylloscopus plumbeitarsus</i>	Two-barred Warbler	0	0	2	0	0	0
<i>Phylloscopus coronatus</i>	Eastern Crowned Leaf Warbler	1	0	0	1	0	0
<i>Phylloscopus claudiae</i>	Claudia's Leaf Warbler	0	0	1	0	0	0
<i>Acrocephalus bistrigiceps</i>	Black-browed Reed-Warbler	0	0	0	2	2	2
<i>Acrocephalus orientalis</i>	Oriental Reed-Warbler	17	13	19	28	15	18



Scientific Name	Common Name	2014	2015	2016	2017	2018	2019
<i>Locustella certhiola</i>	Pallas's Grasshopper-Warbler	0	0	1	0	0	1
<i>Locustella ochotensis</i>	Middendorff's Grasshopper-Warbler	0	1	0	4	0	0
<i>Locustella lanceolata</i>	Lanceolated Warbler	0	0	2	0	0	0
<i>Locustella alishanensis</i>	Taiwan Bush-Warbler	1	1	1	4	3	3
<i>Cisticola juncidis</i>	Zitting Cisticola	49	46	61	68	28	36
<i>Cisticola exilis</i>	Golden-headed Cisticola	6	14	18	18	8	9
<i>Prinia crinigera</i>	Striated Prinia	3	10	1	8	6	6
<i>Prinia flaviventris</i>	Yellow-bellied Prinia	226	279	463	474	468	499
<i>Prinia inornata</i>	Plain Prinia	860	821	1128	1375	1357	1249
<i>Fulvetta formosana</i>	Taiwan Fulvetta	38	81	93	19	45	43
<i>Sinosuthora webbiana</i>	Vinous-throated Parrotbill	218	373	245	420	462	329
<i>Suthora verreauxi</i>	Golden Parrotbill	30	120	0	0	2	40
<i>Yuhina brunneiceps</i>	Taiwan Yuhina	1379	1675	1505	1079	1523	2196
<i>Zosterops japonicus</i>	Japanese White-eye	4936	5059	8011	5697	6070	7328
<i>Zosterops meyeni</i>	Lowland White-eye	0	0	21	2	0	0
<i>Cyanoderma ruficeps</i>	Rufous-capped Babbler	795	672	909	830	750	873
<i>Pomatorhinus musicus</i>	Taiwan Scimitar-Babbler	654	656	869	906	760	841
<i>Megapomatorhinus erythrocemis</i>	Black-necklaced Scimitar-Babbler	149	166	210	244	172	195
<i>Schoeniparus brunneus</i>	Dusky Fulvetta	141	93	242	271	120	202
<i>Alcippe morrisonia</i>	Morrison's Fulvetta	2145	2066	2105	1605	1964	2250
<i>Garrulax canorus</i>	Hwamei	0	5	11	16	51	27
<i>Garrulax taewanus</i>	Taiwan Hwamei	86	53	97	80	66	71
<i>Ianthocincla ruficeps</i>	Rufous-crowned Laughingthrush	10	126	3	11	25	207
<i>Ianthocincla chinensis</i>	Black-throated Laughingthrush	6	7	2	1	1	4
<i>Ianthocincla poecilorhyncha</i>	Rusty Laughingthrush	46	77	49	30	36	81
<i>Trochalopteron morrisonianum</i>	White-whiskered Laughingthrush	65	90	99	44	107	47
<i>Heterophasia auricularis</i>	White-eared Sibia	729	813	595	498	728	837
<i>Liocichla steerii</i>	Steere's Liocichla	342	285	395	313	303	397
<i>Actinodura morrisoniana</i>	Taiwan Barwing	106	141	111	18	64	95
<i>Muscicapa dauurica</i>	Asian Brown Flycatcher	6	0	4	8	7	10
<i>Muscicapa griseisticta</i>	Gray-streaked Flycatcher	0	0	5	8	0	1
<i>Muscicapa ferruginea</i>	Ferruginous Flycatcher	1	2	0	1	1	2
<i>Copsychus saularis</i>	Oriental Magpie-Robin	14	213	165	205	207	254
<i>Copsychus malabaricus</i>	White-rumped Shama	5	16	13	36	21	53
<i>Niltava vivida</i>	Vivid Niltava	77	102	93	127	139	83
<i>Cyanoptila cyanomelana</i>	Blue-and-white Flycatcher	0	0	0	0	0	1
<i>Eumyiias thalassinus</i>	Verditer Flycatcher	0	0	1	0	3	3
<i>Brachypteryx montana</i>	White-browed Shortwing	11	15	17	14	10	6
<i>Larvivora akahige</i>	Japanese Robin	0	0	0	0	2	3
<i>Larvivora cyane</i>	Siberian Blue Robin	0	0	0	0	0	1
<i>Luscinia svecica</i>	Bluethroat	0	0	1	1	1	4





Scientific Name	Common Name	2014	2015	2016	2017	2018	2019
<i>Myophonus insularis</i>	Taiwan Whistling-Thrush	88	63	59	81	53	99
<i>Myophonus caeruleus</i>	Blue Whistling-Thrush	6	8	24	20	30	15
<i>Enicurus scouleri</i>	Little Forktail	17	12	19	8	16	13
<i>Calliope calliope</i>	Siberian Rubythroat	60	88	179	226	182	207
<i>Cinclidium leucurum</i>	White-tailed Robin	38	24	25	29	32	38
<i>Tarsiger cyanurus</i>	Red-flanked Bluetail	17	20	14	9	9	9
<i>Tarsiger indicus</i>	White-browed Bush-Robin	2	8	2	2	2	6
<i>Tarsiger johnstoniae</i>	Collared Bush-Robin	56	57	43	34	46	35
<i>Ficedula albicilla</i>	Taiga Flycatcher	1	0	1	2	0	0
<i>Ficedula zanthopygia</i>	Korean Flycatcher	2	0	0	0	0	0
<i>Ficedula mugimaki</i>	Mugimaki Flycatcher	0	0	0	1	0	3
<i>Ficedula hyperythra</i>	Snowy-browed Flycatcher	14	9	19	10	32	18
<i>Ficedula parva</i>	Red-breasted Flycatcher	1	2	2	4	0	2
<i>Phoenicurus fuliginosus</i>	Plumbeous Redstart	180	222	178	170	223	261
<i>Phoenicurus auroreus</i>	Daurian Redstart	293	414	531	484	517	685
<i>Monticola solitarius</i>	Blue Rock-Thrush	100	129	145	123	116	108
<i>Saxicola maurus</i>	Siberian Stonechat	10	21	19	26	19	44
<i>Zoothera spp.</i>	White's / Scaly Thrush	44	18	20	31	42	7
<i>Turdus hortulorum</i>	Gray-backed Thrush	1	2	5	2	3	0
<i>Turdus cardis</i>	Japanese Thrush	0	1	0	0	0	0
<i>Turdus mandarinus</i>	Chinese Blackbird	9	42	158	116	58	141
<i>Turdus poliocephalus</i>	Island Thrush	7	2	3	2	2	1
<i>Turdus obscurus</i>	Eyebrowed Thrush	32	16	6	9	21	12
<i>Turdus pallidus</i>	Pale Thrush	263	1090	599	310	173	56
<i>Turdus chrysolaus</i>	Brown-headed Thrush	292	401	302	297	384	243
<i>Turdus ruficollis</i>	Red-throated Thrush	0	0	2	0	0	0
<i>Turdus eunomus</i>	Dusky Thrush	36	155	116	134	47	10
<i>Turdus naumannni</i>	Naumann's Thrush	7	26	20	6	1	0
<i>Aplonis panayensis</i>	Asian Glossy Starling	75	82	133	104	213	156
<i>Acridotheres cristatellus</i>	Crested Myna	427	2701	2201	3148	4600	3551
<i>Acridotheres javanicus</i>	Javan Myna	3134	2957	3994	4565	4652	4977
<i>Acridotheres fuscus</i>	Jungle Myna	10	9	6	0	3	0
<i>Acridotheres tristis</i>	Common Myna	1504	1481	1891	2517	2267	2467
<i>Gracupica nigricollis</i>	Black-collared Starling	205	197	240	470	455	397
<i>Agropsar sturninus</i>	Daurian Starling	0	0	0	1	0	0
<i>Agropsar philippensis</i>	Chestnut-cheeked Starling	6	0	0	6	5	0
<i>Sturnia sinensis</i>	White-shouldered Starling	122	124	181	359	188	188
<i>Sturnia malabarica</i>	Chestnut-tailed Starling	29	127	68	162	141	285
<i>Pastor roseus</i>	Rosy Starling	1	0	0	0	0	0
<i>Spodiopsar sericeus</i>	Red-billed Starling	276	122	705	289	157	174
<i>Sturnus vulgaris</i>	European Starling	26	7	7	3	0	12



Scientific Name	Common Name	2014	2015	2016	2017	2018	2019
<i>Spodiopsar cineraceus</i>	White-cheeked Starling	74	77	114	100	59	68
<i>Dicaeum minullum</i>	Plain Flowerpecker	9	20	15	23	30	31
<i>Dicaeum ignipectus</i>	Fire-breasted Flowerpecker	56	89	135	42	55	95
<i>Aethopyga christinae</i>	Fork-tailed Sunbird	0	7	83	11	6	18
<i>Prunella collaris</i>	Alpine Accentor	2	4	0	8	1	0
<i>Motacilla tschutschensis</i>	Eastern Yellow Wagtail	1423	1222	1394	1233	1628	1298
<i>Motacilla flava</i>	Western Yellow Wagtail	457	43	0	1	0	0
<i>Motacilla citreola</i>	Citrine Wagtail	0	0	0	0	1	0
<i>Motacilla cinerea</i>	Gray Wagtail	350	442	617	634	614	615
<i>Motacilla alba</i>	White Wagtail	386	489	665	770	824	1011
<i>Motacilla grandis</i>	Japanese Wagtail	0	0	1	0	0	0
<i>Anthus richardi</i>	Richard's Pipit	54	87	91	146	210	227
<i>Anthus godlewskii</i>	Blyth's Pipit	0	0	0	0	1	0
<i>Anthus hodgsoni</i>	Olive-backed Pipit	165	246	241	226	320	344
<i>Anthus gustavi</i>	Pechora Pipit	1	0	0	1	1	0
<i>Anthus cervinus</i>	Red-throated Pipit	183	66	271	245	184	133
<i>Anthus rubescens</i>	American Pipit	2	6	10	13	2	1
<i>Dendronanthus indicus</i>	Forest Wagtail	0	0	0	1	1	0
<i>Emberiza yessoensis</i>	Ochre-rumped Bunting	0	0	0	0	1	0
<i>Emberiza tristrami</i>	Tristram's Bunting	9	0	0	0	3	0
<i>Emberiza fucata</i>	Chestnut-eared Bunting	0	0	0	1	1	1
<i>Emberiza chrysophrys</i>	Yellow-browed Bunting	0	2	1	0	0	0
<i>Emberiza pusilla</i>	Little Bunting	9	7	55	36	36	9
<i>Emberiza rustica</i>	Rustic Bunting	0	0	5	1	0	0
<i>Emberiza elegans</i>	Yellow-throated Bunting	0	3	9	0	15	1
<i>Emberiza aureola</i>	Yellow-breasted Bunting	0	0	0	0	1	0
<i>Emberiza melanocephala</i>	Black-headed Bunting	0	0	1	0	1	0
<i>Emberiza bruniceps</i>	Red-headed Bunting	0	0	1	2	1	0
<i>Emberiza sulphurata</i>	Yellow Bunting	0	0	7	0	1	14
<i>Emberiza spodocephala</i>	Black-faced Bunting	163	256	375	344	444	395
<i>Fringilla montifringilla</i>	Brambling	45	48	30	121	52	1
<i>Pyrrhula nipalensis</i>	Brown Bullfinch	37	20	18	32	32	27
<i>Pyrrhula erythaca</i>	Gray-headed Bullfinch	1	24	12	2	6	8
<i>Carpodacus formosanus</i>	Taiwan Rosefinch	11	4	5	2	5	14
<i>Chloris sinica</i>	Oriental Greenfinch	6	8	105	106	41	61
<i>Spinus spinus</i>	Eurasian Siskin	0	45	0	0	118	20
<i>Coccothraustes coccothraustes</i>	Hawfinch	2	0	0	0	0	0
<i>Eophona migratoria</i>	Yellow-billed Grosbeak	0	3	107	76	53	111
<i>Eophona personata</i>	Japanese Grosbeak	0	0	0	1	0	0
<i>Passer domesticus</i>	House Sparrow	0	0	0	0	0	111
<i>Passer rutilans</i>	Russet Sparrow	0	0	1	9	28	2





Scientific Name	Common Name	2014	2015	2016	2017	2018	2019
<i>Passer montanus</i>	Eurasian Tree Sparrow	17994	18511	21023	27687	22238	30106
<i>Estrilda melpoda</i>	Orange-cheeked Waxbill	0	0	11	19	5	0
<i>Euodice malabarica</i>	Indian Silverbill	30	3	86	16	25	81
<i>Lonchura striata</i>	White-rumped Munia	394	333	440	477	281	480
<i>Lonchura punctulata</i>	Nutmeg Mannikin	1659	2384	2411	2284	3058	3417
<i>Lonchura atricapilla</i>	Chestnut Munia	27	151	11	158	7	78
<i>Cairina moschata</i>	Muscovy Duck	0	11	16	19	30	37
<i>Pavo spp.</i>	Peafowl	0	49	0	5	31	6
<i>Geopelia striata</i>	Zebra Dove	0	23	0	14	21	56
<i>Urocissa erythrorhyncha</i>	Red-billed Blue Magpie	1	2	0	0	0	0
<i>Yuhina castaniceps</i>	Striated Yuhina	0	0	30	0	0	0
<i>Brachypteryx leucophrys</i>	Lesser Shortwing	0	0	0	2	0	0
<i>Acridotheres grandis</i>	Great Myna	13	1	11	3	2	0
<i>Acridotheres burmannicus</i>	Vinous-breasted Starling	0	21	2	7	6	4
<i>Gracupica contra</i>	Pied Myna	0	0	0	1	0	0
<i>Estrilda astrild</i>	Common Waxbill	0	0	0	2	0	0
<i>Melopsittacus undulatus</i>	Budgerigar	0	1	0	1	0	0
<i>Cacatua galerita</i>	Sulphur-crested Cockatoo	0	1	0	0	1	0
<i>Cacatua goffiniana</i>	Tanimbar Corella	0	3	0	0	0	0
<i>Psittacula krameri</i>	Rose-ringed Parakeet	0	0	0	1	0	2
<i>Phoenicopterus roseus</i>	Greater Flamingo	0	2	1	3	1	0
<i>Lonchura maja</i>	White-headed Munia	0	0	0	0	2	0
unable to ID		28	89	10644	2978	289	308

Open Data

All Taiwan NYBC data is open to the public and can be found at the following two websites:

(1) Taiwan's Environmental Protection Administration

<https://opendata.epa.gov.tw/>

(2) eBird Taiwan

<https://ebird.org/taiwan/home>



NYBC History

2013

- 2013.Oct.16 – Launch of official NYBC website
- 2013.Oct.24 – Launch of official NYBC Facebook page
- 2013.Dec.28 – NYBC 2014 begins

2014

- 2014.Jan.12 – NYBC 2014 ends
- 2014.Aug.19 – Poster presentation introducing NYBC debuts at IOC26 in Tokyo, Japan
- 2014.Dec.20 – NYBC 2015 begins

2015

- 2015.Jan.11 – NYBC 2015 ends
- 2015.Mar.10 – First NYBC press conference held to discuss results of NYBC 2015
- 2015.Dec.19 – NYBC 2016 begins

2016

- 2016.Jan.10 – NYBC 2016 ends
- 2016.Mar.22 – NYBC 2016 Press Conference held
- 2016.Nov.28 – NYBC becomes member of the Asian Waterbird Census, contributing data on behalf of Taiwan
- 2016.Dec.17 – NYBC 2017 begins

2017

- 2017.Jan.08 – NYBC 2017 ends
- 2017.Apr.11 – NYBC 2017 Press Conference held
- 2017.Dec.16 – NYBC 2018 begins

2018

- 2018.Jan.07 – NYBC 2018 ends
- 2018.Aug.23 – Oral presentation on NYBC results made at IOC27 in Vancouver, Canada
- 2018.Nov.19 – NYBC organizers attend AWC annual meeting
- 2018.Dec.15 – NYBC 2019 begins

2019

- 2019.Jan.06 – NYBC 2019 ends





Support the NYBC

Help us continue the count!

The Taiwan NYBC is one of the most successful citizen science projects in Taiwan. Though only six years old, the data collected is already having an impact on 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 <http://nybc.tw>



Taiwan New Year Bird Count

2019 Annual Report

The materials presented in this work and the geographical designations employed therein do not imply any opinion whatsoever on the part of the CWBF or TESRI concerning the legal status of any country, territory, or area, or concerning the delineation of borders or boundaries.

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