TRENDS IN THE STATE LIST OF NEW YORK BIRDS

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During the past two decades there has come a creeping awareness that the epicenter of North American field ornithology has shifted from the east to the west coast. The list of astonishing records emanating from the deserts and coast of California seems endless. Perusal of the regional reports in *American Birds* suggests that the state lists of California and other southwestern states are growing like Topsy. The East, especially the Northeast, seems stagnant by comparison. What are the facts in the matter?

An interesting recent article by Joe Jehl (1980) in *Western Birds* provides some hard figures. The California state list at the end of 1979 was approximately 535 species, second only to Texas. Jehl analyzed additions to the list on a yearly basis beginning in 1944. From 1945-1959 the list increased by an average of 1.6 species per year, and the trend was quite linear. From 1960-1979, the trend was also linear, but with a much greater slope, with species being added at a rate of 4.0 species per year. Interestingly, there is no indication that the rate is slowing down, as it inevitably must because the pool of species that may be added is finite and presumably the easiest additions should be made early on. Jehl attributes most of the huge increase in the rate of growth of the list to the revolution in birding methods kindled by Guy McCaskie around 1960. These methods included a systematic, informed search for vagrant birds in places where logic suggested they might concentrate, such as coastal points and desert oases, and frequent pelagic trips.

Jehl's article prompted me to convert my vague notion into some hard numbers for New York. By my count, the New York State list was approximately 432 species at the end of 1981 (the official state list compiled by NYSARC [1981] stood at 423 species at that time; I have included some records which have not to date been evaluated by NYSARC, and I have excluded single-observer sight records where they constitute the only basis for occurrence of a species in the state). In 1944 the list contained 397 species; during the next 36 years, 35 species were added (Bull, 1974, 1976, and scattered other sources), an increase of about 9%. Each of the additions is tabulated by year in Table 1 and the growth curve is plotted in Fig. 1. The general trend is quite linear. On average we have been adding about one species per year to the list. Viewed by decades, however, some suggestions of currents within this trend emerge. Between 1945-1955, 12

species were added; between 1955-1965, 11 species were added; and between 1965-1975, only 7 additions were made. This seems to point to a slowing of the growth rate. In fact, during the period 1954-1962, 14 species were added in 9 years, including a year with four new species (1954) and two years in which three new species were logged (1959, 1962). The rate of about 1.5 species per year during that period contrasts slightly with the remarkably consistent one species of recent years.

From whence have the new species probably come? Table 2 shows the probable origin of the 35 species new to New York since 1944. It is clear that western North America has been the predominant source area; that trend has persisted over the whole period I have examined. As we shall see, many active observers expect this pattern to persist.

With this background we can return to a comparison with California. Over the past two decades that state has been adding new birds at an annual rate about four times that of New York; in terms of percentage increase over the period 1944 to present, California has seen a 24% increase, New York a 9% increase. Several factors are probably responsible for these differences, 1) California has about three times the area of New York, spans a tremendous breadth of latitude, and has much greater habitat diversity. On these grounds alone one would expect a much larger species list. 2) Field ornithology in New York has a much longer history than in California. Because new species are drawn from an ever decreasing pool of potential additions, new discoveries should be made more frequently in the earlier stages of exploration. This surely accounts for at least part of the large difference in percentage increase. 3) California is deriving new species from larger source pools than is New York. Between 1960-69, a large majority (59%) of California's new species were of North American origin. But during the next decade, the North American contribution dropped to 32%, with Arctic/Asian, Mexican and pelagic source areas contributing significant amounts (20-26%). While New York continues to derive most of its additions from the relatively small North American pool, California is tapping two very large faunas, Arctic/Asian and Mexican.

Given these inherent inequalities, could a revolution in field methods and intensity of coverage, such as that launched by McCaskie, bring New York on a par with California? Probably not, but our knowledge of bird distribution in the state could hardly be retarded as a result, and there may be some virtue in considering what new species are most likely to be found. After all, an informed observer

aware of the possibilities and probabilities really is more likely to discover rare birds. On the west coast, it is common practice to spend large amounts of time and effort in a premeditated search for rare birds. In that spirit I conscripted several active New York State birders (members of NYSARC and the holders of the largest state lists) to make predictions concerning the next ten species to be added to the New York list (Table 3). At the current rate, that amounts to looking into the crystal ball for ten years into the future. All sorts of conscious and unconscious biases enter into the construction of such lists. Among them would be conspicuousness and ease of identification of species, estimates of coverage of the various areas of the state, predicted frequency of pelagic trips, etc. Given all these variables, there is a strong consensus that western North America will continue to be the predominant source of new species in New York. Because of the large number of shorebird species mentioned on the lists, Arctic/Asian species are predicted to assume a more prominent position than recent past history indicates, although the difference between the two columns in Table 2 is not statistically significant (Chi Square test). The Rufous-necked Stint *(Calidris ruficollis)* appeared on all five lists; the Mew Gull *(Larus canus)* and Spotted Redshank *(Tringa erythropus)* on four; and the Black-tailed Godwit *(Limosa limosa)* and Sharp-tailed Sandpiper *(Calidris acuminata)* on three. This last species was documented in July, 1981, after these lists were made.

At the suggestion of Paul Buckley, some consultants also took a shot at predicting the next five species to be documented as breeders in the state. For some reason this was deemed to be a harder task than predicting additions to the state list (thus only five species predicted). With the Breeding Bird Atlas project underway, we may be able to soon put these forecasts to the test.

ACKNOWLEDGMENTS

I want to thank Paul Buckley, Tom Davis, Paul DeBenedictis, and Bob Paxton for not taking themselves too seriously to play this game with me. However their predictions turn out, they will at least have to think twice before proclaiming "long overdue!" on the occasion of the next addition to the state list. Joe Jehl's article provided the initial stimulus for this exercise and Paul Buckley hounded me to finish it once I had begun.

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TABLE 1

Species recorded for the first time in New York during the period 1944-1981, by years.

1945	
1946	Bar-tailed Godwit
1947	Townsend's Warbler
	Brewer's Sparrow*
1948	Western Meadowlark
1949	
1950	Bridled Tern
	Swainson's Warbler
1951	
1952	
1953	White-faced Storm-Petrel
1954	Cattle Egret
	Lewis' Woodpecker*
	Boat-tailed Grackle
	Golden-crowned Sparrow*
1955	Tufted Duck
1956	
1957	Sandwich Tern
1958	
1959	Redwing
	Bell's Vireo
	Black-headed Grosbeak
1960	Yellow-nosed Albatross
	Smew
1961	
1962	Fulvous Whistling-Duck
	Greenshank*
	Green-tailed Towhee
1963	Red-billed Tropicbird
1964	
1965	Brambling*
1966	Brewer's Blackbird
1967	
1968	Monk Parakeet
1969	
1970	Ash-throated Flycatcher
1971	Northern Fulmar
1972	
1973	Fieldfare
1974	Mountain Bluebird
	Smith's Longspur
1975	
1976	
1977	Anhinga
1978	California Gull
1979	Mississippi Kite
1980	Painted Redstart
1981	Sharp-tailed Sandpiper

* Species not yet included in the official New York State list compiled by NYSARC.

TABLE 2

Probable source areas of species recorded for the first time in New York State during the period 1944-1981. Allocation of some species was necessarily arbitrary.

Source Area	Added 1944-1981	Predicted 1981–
Western North America	15 (43%)	17 (57%)
Europe	7 (20%)	4 (13%)
Southern United States	6 (17%)	2 (7%)
Pelagic	5 (14%)	2 (7%)
Arctic/Asian	1 (3%)	5 (16%)
Introduced	1 (3%)	-- ---

TABLE 3

The predicted next ten additions to the New York State List in descending order of likelihood.

P. A. Buckley	T. H. Davis	P. DeBenedictis	R. O. Paxton	K. P. Able
Mew Gull	Mew Gull	Groove-billed Ani	Rufous Hummingbird***	Mew Gull
Sharp-tailed Sandpiper*	Rufous-necked Stint	Sharp-tailed Sandpiper*	Spotted Redshank	Rufous-necked Stint
Western Wood-Pewee	Sharp-tailed Sandpiper*	Rufous-necked Stint	Mew Gull	Rufous Hummingbird***
Spotted Redshank	Black-browed Albatross	Black-tailed Godwit	Common Ground-Dove	Black-tailed Godwit
Great-tailed Grackle	Garganey	Vermilion Flycatcher	Rufous-necked Stint	Spotted Redshank
Rufous-necked Stint	Virginia's Warbler	Hammond's Flycatcher	Black-tailed Godwit	Ross' Gull
Harcourt's Storm-Petrel	Little Stint	Harcourt's Storm-Petrel	Hermit Warbler	Great-tailed Grackle
Ross' Goose	Ross' Gull	Band-tailed Pigeon	Black-chinned Sparrow	Common Ground-Dove
Lazuli Bunting	Black-throated Sparrow	Lazuli Bunting	Hammond's Flycatcher	Rock Wren
Ancient Murrelet	Spotted Redshank	Reddish Egret	Sprague's Pipit	Prairie Falcon

The predicted next five documented breeding species in descending order of likelihood.

White-faced Ibis	Wilson's Phalarope	Boat-tailed Grackle**	Royal Tern
Wilson's Phalarope	Blue Grosbeak**	Black-necked Stilt	Blue Grosbeak**
Black Vulture	Royal Tern	Yellow Rail	Lesser Black-backed Gull
Blue Grosbeak**	Manx Shearwater	Royal Tern	White-winged Crossbill
Brewer's Blackbird	Black Vulture	Manx Shearwater	Horned Grebe

* These lists were made up in April, 1981, prior to the first occurrence of the Sharp-tailed Sandpiper in the state in July, 1981.

** The Boat-tailed Grackle and Blue Grosbeak have been confirmed in New York State since this list was completed.

*** The NYSARC has assigned *Selasphorus* genus to the bird discovered by Geoffrey Carleton on 3 Sept 1980 (*Kingbird* Vol. 31, No. 1, p. 3), having determined it was not possible to identify as to the species.

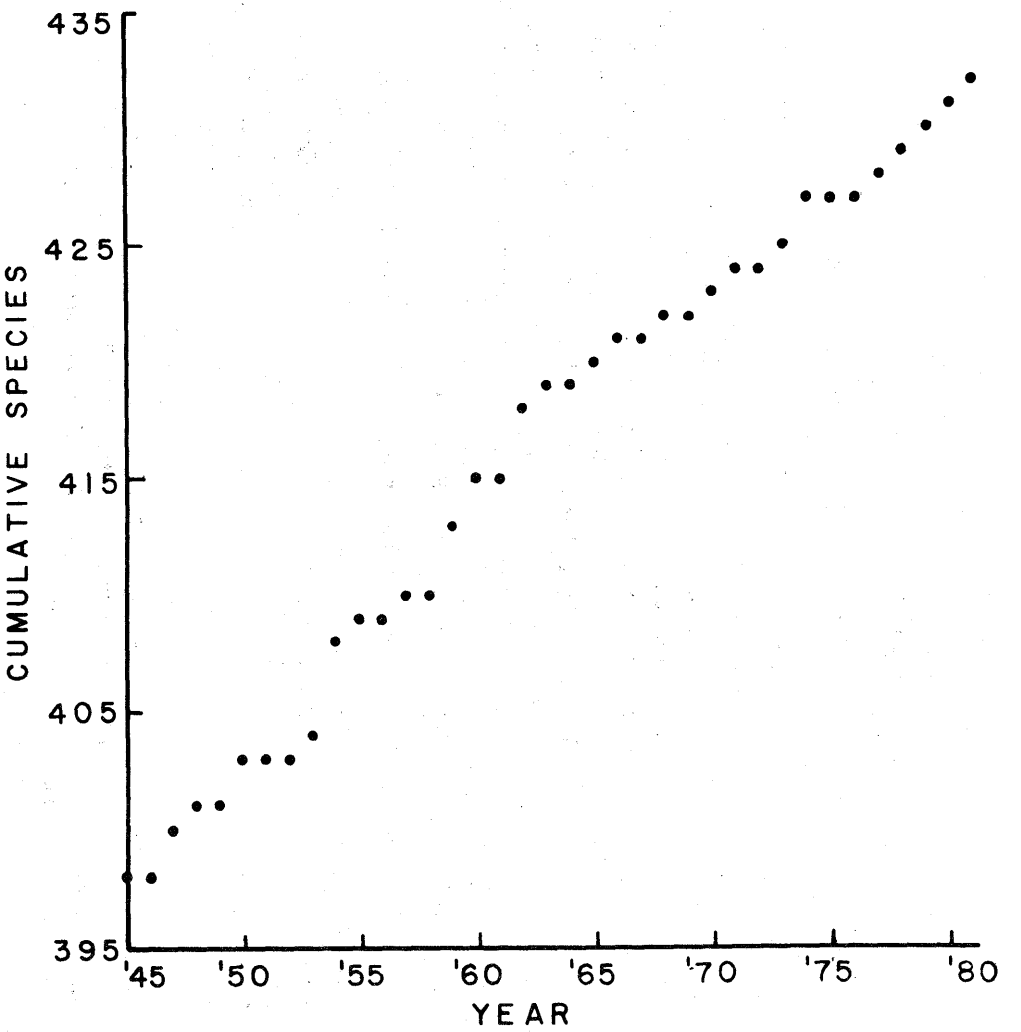

Fig. 1. The cumulative number of species recorded in New York State, 1944 to present, plotted by years.