



REFLECTIONS

Sixty Years at Patuxent

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Early Years (1940s)

■ <u>Yes</u>	■ <u>No</u>
■ Punch cards	■ Endangered species
■ Plug boards, cables	■ Personal computers
■ Typewriters	■ Cell phones, GPS
■ Carbon paper	■ Mist nets
■ Postage 3 cents	■ Female researchers doing fieldwork

Early Research at Patuxent

- 330-ft. grid established; habitat mapping
- Stomach examinations just ending (economic ornithology money cut off by Congress)
- Chief fieldwork in 1940s:
- Initial inventory of plants, mammals, birds, reptiles, amphibians, fish
- Collections of plants, bird skins, stomachs, feathers, skeletons),

Bird Inventories

(Bob Stewart, Sr.)

- Avifauna list (227 species by 1951)
- Nest record, Behavior, and Food habits cards
- Winter Bird Surveys 1941-49
- Seasonal Population Fluctuation Study, 300 A
- Extensive breeding bird census (1943)
- Intensive breeding bird census in each major habitat
- Extensive Winter Bird Census (winters of 1943-44 and 1944-45)
- Seasonal occurrence by families
- Bird banding (baiting with grain and dripping water)

Breeding bird populations at Patuxent Research Refuge

- Mapped breeding bird distribution by hiking all plot lines, summer of 1943.
- Lines were easy to follow. Vegetation had not grown back since surveying.
- Next extensive breeding season survey of the entire Refuge was a point count survey on a 402m grid by Danny Bystrak 53 years later.

Birds with stable populations at Patuxent

(Boundaries and methods different, but populations similar)

Species	1943	1996
Red-bellied Woodpecker	69	81
Eastern Wood-Pewee	60	68
Yellow-throated Vireo	50	30
Wood Thrush	290	326
Ovenbird	202	344
Scarlet Tanager	215	152

Some up, some down.



Birds with increasing populations

■ Species	1943	1996
■ Canada Goose	0	30
■ Pileated Woodpecker	1.5	15
■ White-breasted Nuthatch	0	42
■ Brown-headed Cowbird	3	86

Species decimated at Patuxent

■ Species	1943	1996
■ Black-and-white Warbler	45	1
■ Kentucky Warbler	188	4
■ Common Yellowthroat	397	27
■ Hooded Warbler	196	6
■ Yellow-breasted Chat	91	0
■ Eastern Towhee	150	15
■ Field Sparrow	145	5



Other Early Assignments

- DDT effects on songbird populations
- Field assignments (game species):
 - Snipe – Winter & Breeding Distribution (Mexico to Canada)
 - Doves – Developing Coo Count Methodology w/Peters, Foote, Duvall

Planning the Breeding Bird Survey

- Mourning Dove coo count method was a possible model.
- Wisconsin Summer Bird Count 1961-65 – like CBC, car and foot; not standardized.
- British Common Birds Census – like Audubon BBC, plots selected by observer; not random.
- Wholesale spraying of college campuses w/DDT suggested urgent need for survey.

Could we initiate a BBS?

- We were phasing out our cooperative migration program, encouraging publication of migration records in Audubon Field Notes.
- So map expert Ceil Nalley was available to work full time on BBS.
- BBL key punch people had little band processing work in the summer, so could enter BBS data.
- John Aldrich said OK if no money required.
- We had free phone and mail service.
- No need for formal proposal, ACUC, etc.

Field testing BBS

- Field testing in 1963-64 for optimal starting time, number and length of stops in different states and habitats.
- Successful Pilot Study in 1965: ran 50 random routes in MD, 10 in DE (Jack Linehan).
- Every observer had to also run a check route that I had run, as quality control.

The Future

- After 40 years experience, we field observers know we are detecting changes.
- Some increases, many declines. We see these daily in areas we are familiar with.
- But we also acknowledge increases in traffic, in environmental noise, and in the age of observers that affect the counts.
- And off-road habitats are undersampled.

The Future

- We have a wonderful corps of enthusiastic & dedicated observers, the best in the world.
- We are reluctant to make changes in protocol or place extra burdens on observers.

The Future

- We realize that there are commercial interests such as wind turbine developers that may seek to challenge BBS trends in court, so it becomes necessary to find ways to measure effects of the variables that affect the BBS trends.

The Future

- Studies have been underway to measure effects of ambient noise and observer age on point counts, to estimate detection rates of various species at different distances, and to conduct simultaneous counts by pairs of observers to measure detection rates.

The Future ?

- Recruits at age 12
- Decibel meters
- Double counting
- Night routes
- Canoe routes
- Hearing tests
- Check routes
- Bicycle routes
- Atlas trends for off-road species

