An Interview with Dr. David DeSante

Founder of IBP and the MAPS and MoSI Programs

Twenty-eight years after founding IBP, David DeSante fully retired this year. Dave will continue to serve as President on IBP's Board, but looks forward to spending less time at IBP and more time with grandkids and birding in the coming year.

How did you first become interested in birds?
I can't remember not being crazy about birds. My parents told me my first words were, "Pissh – pssh – pssh," but that's probably not true! One day when I was 5 or 6 I flushed a bird that had flashing golden wings and I ran in the house to tell my dad I saw a Baltimore Oriole, which I knew was his favorite bird, and he said "Naw, that was a Flicker – a woodpecker. See those white and black woodpeckers with the bright red heads?" I said, "What woodpeckers?" – and thus we discovered that I needed glasses. Did I see lots of new birds after that!

You've had a varied career in science and academia. What were you doing before you founded IBP?
I went to the Case Institute of Technology and chose the easiest major, Metallurgical Engineering, hoping just to be able to graduate. I did, and then chose a draft-deferred job in the aerospace industry in Southern California.

Knowing that I was leaving behind spring warbler migration in Ohio was hard, but I soon found out that a couple of guys in California, Guy McCaskie and Rich Stallcup, were finding all manner of eastern warblers in coastal California. Eventually, a series of flukes took me to Stanford and a Ph.D. in Biology with a dissertation on "Mirror-image misorientation in warblers." This led to teaching positions at Stanford and Reed College.

But an opportunity to set up a long-term research program on a Sierra subalpine bird community in 1977 rekindled my love for research in natural environments. In 1978, I left Reed for the Point Reyes Bird Observatory (now Point Blue), standardized their banding program, and established another long-term study of a natural avian community using known-age, individually color-banded populations.

What has been your proudest achievement with the MAPS & MoSI Programs?
I don't know that I can single out one. I stressed to early biologists at IBP that the data we were collecting would allow future researchers to answer questions that we could not even ask yet, and this has been confirmed several times. It also became apparent early on that an overall improvement in the quality of data collected by the bird-banding community was necessary.

So, in addition to creating MAPS and MoSI, IBP became a primary creator of the North American Banding Council (NABC), which has led to the training of thousands of bird banders. Virtually every time these banders band birds, some onlooker – a child, or maybe a parent – is moved to appreciate and love the beauty and magic of our feathered brothers and sisters.

This may be the most important conservation work any of us can do.

MoSI Data Show Complex Winter Movements of Migratory Songbirds

For centuries, long-distance bird migration was one of Earth's great mysteries. Using new technology and innovative analytical methods, scientists are gradually learning more about it – and it appears to be more complex than previously thought. In a paper published this year in *Journal of Applied Ecology*, IBP Research Associate Viviana Ruiz-Gutierrez, IBP Scientist Jim Saracco, and colleagues make inferences about within-season movements of migratory songbirds on their tropical wintering grounds by applying new modeling techniques to mark-recapture data gathered at MoSI stations.

Results indicate that many individuals moved into and out of the study areas through the winter, challenging the widely held notion that birds are relatively sedentary between their long migratory movements.

Winter movements in songbirds (including for Prothonotary Warbler, above) appear to be more complex than previously appreciated and suggest a need to consider networks of non-breeding habitats for conservation. Photo: Laura Gooch

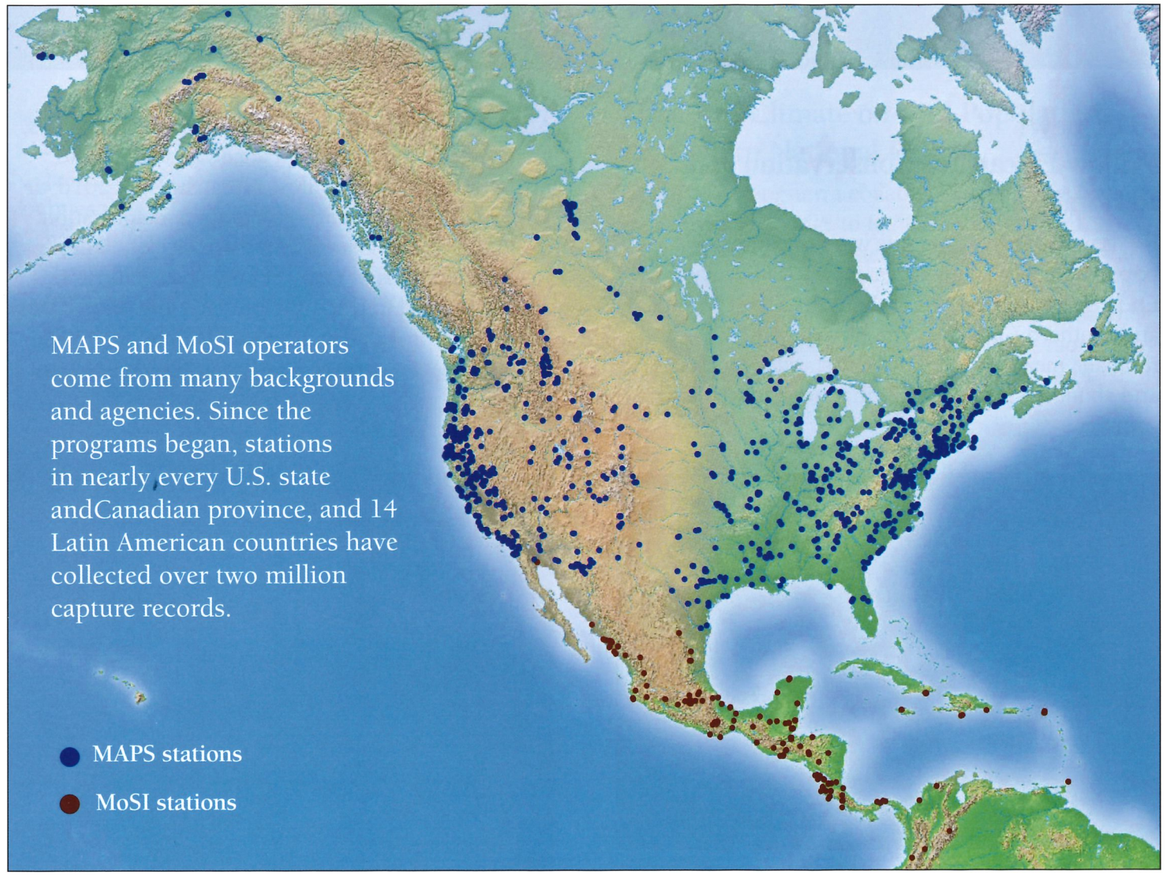

Table 1. The effectiveness of several census and demographic monitoring methods.[a]

VARIABLES AND CHARACTERS	CENSUS			DEMOGRAPHIC	
	POINT COUNT	SPOT MAP	AREA SEARCH	MIST NETS	NEST MONITOR
Variables Measured					
Index to abundance	Yes	Yes	Yes	Yes	Partly
Density	No	Yes	No	No	Partly
Survivorship (adult)	No	No	No	Yes	No
Survivorship (juvenile)	No	No	No	Yes	Partly
Productivity	No	No	No	Yes	Yes
Recruitment	No	No	No	Yes	No
Habitat relations	Yes	Yes	Yes	Partly	Partly
Nest site characters	No	No	No	No	Yes
Clutch size	No	No	No	No	Yes
Predation/parasitism	No	No	No	No	Yes
Individuals identified	No	No	No	Yes	No
Breeding status known	No	Yes	No	Partly	Yes
General Characters					
Habitat types measured	All	Some	Most	Some	Few
Habitat specificity	Good	Good	Good	Fair	Good
Rare species measured	Some	Few	Many	Some	Few
Canopy species measured	All	All	All	Some	Few
Area sampled known	Partly	Yes	Yes	Partly	Yes
Size of area sampled	Moderate	Small	Small	Large	Small
Training necessary	Much	Much	Moderate	Much	Much
Observer error potential	High	High	Moderate	Moderate	Moderate
Use in non-breeding	Yes	No	Yes	Yes	No
Cost per data point	Low	High	Low	High	High

[a] Table from Butcher (1992) and Ralph et al. (1993).

Table 2. Potential objectives of a monitoring program and the minimum number of years needed for a method to achieve results.[a,b]

OBJECTIVES	METHOD					
	SINGLE POINT COUNT[c]	REPEAT POINT COUNT[d]	AREA SEARCH[e]	SPOT MAP	MIST NETS[f]	NEST MONITOR[f]
Inventory (presence/ absence of species)	1	1	1	1	1	NP[g]
Inventory rare species	2-3	1-3	1-3	1-3	1-3	NP
Determine species richness	2-3	1-3	1-3	1-3	NP	NP
Determine relative abundance	1-2	1-2	1-3	1-2	3-5	NP
Determine species status and seasonality	NP	1-3	1-3	1-3	1-3	1-3
Determine population trend	6-10	4-9	10+	4-9	6-10	NP
Determine productivity	NP	NP	NP	NP	1-3	1-2
Determine individual survivorship	NP	NP	NP	3-5[h]	3-5	NP
Life history traits	NP	NP	NP	3-5	NP	1-2
Habitat association or preferences	1-2	1-2	1-2	1-3	NP	1-2
Identify habitat features	4-6	3-5	3-5	2-4	10	1-2
Determine cause of change	NP	NP	NP	NP	2-3	2-3

[a] Table from Geupel and Warkentin (1995) and Nur et al. (1995).

[b] The actual number of years is dependent on study design and will vary considerably depending on sample size (e.g. number of census stations, detection or capture rates, or number of nests found). We assume that the priorities of the monitoring program reflect local or site specific needs.

[c] Each point censused a minimum of one time in a season.

[d] Each station censused a minimum of 3 times in a season.

[e] Each plot censused a minimum of 3 times in a season.

[f] Most authors/programs recommend this method in conjunction with a census of population size.

[g] NP - not possible.

[h] Possible when species are individually color banded.