

July 4, 1999

RAPID ORNITHOLOGICAL INVENTORY PROTOCOL AND SCHEDULE

The Rapid Ornithological Inventory (ROI) is a method of quickly gaining a measure of the birds at a single station to compare their abundance, composition, and population structure with other, similar stations in order to assay their relative value.

Objectives

The objectives are: (1) to quantify the bird population of a site of about 2 ha (about 5 acres, or a 80-m radius circle) by mist netting and census; (2) capture and census as many individuals as possible in the site to provide an adequate sample; and (3) conduct the ROI in relative homogenous habitat. In our region, the high-priority species this project will directly address are the Willow Flycatcher, Yellow-breasted Chat, American Dipper, Olive-sided Flycatcher, and Yellow Warbler. It also addresses the two top high-priority habitats, montane meadow and riverine riparian.

Background and Project Description

The project will be a test of the newly-developed ROI method to determine the components of habitat association and quality, as well as the life history of several species of birds. The Inventory is a method of quickly, in one or two days, gaining a measure of the birds at an array of sites to compare their abundance, composition, and population structure with other, similar stations. This will enable us to assay the relative value of the sites to the birds. We have field tested the method over the past two years, and found it very data rich and predict that it has a very high probability of success. This project has important potential for implementation over a wide geographical area, as we think it can provide data of excellent quality at a relatively low cost.

The unique combination of methods has great potential to provide in-depth information on species composition and structure in a cost-effective manner. In this first year of full scale implementation, specific comparisons, through a randomized plot design, will be made on the effects of the quality and quantity of riverine riparian and montane meadow habitat on the bird communities.

Our concentration of work in the two highest priority habitats in the Klamath Bioregion will address several high-priority landbird species that are largely confined to meadow and riparian habitats.

The combination of diurnal Area Search Census, nocturnal call station survey and netting, and demographic mist-netting will provide a unique combination of tools to test a new survey method.

Coordination

The District Biologists of Forest Service and BLM, as well as others should be consulted to determine the best riparian and meadow sites for the Inventory.

Equipment and procedures

The usual banding equipment should be taken, although if the site is more than a half kilometer from a road, consideration should be given to taking minimal equipment. Upon arrival at a station in mid- to late-afternoon, set up a minimum of six, and preferably eight nets. If qualified personnel are available, and if at all possible, 10 or more should be set. The net sites chosen should involve absolute minimum clearing, being as opportunistic in site selection as is possible. If after the first morning of catching, relatively few birds are caught, for example, less than 25 birds, a couple of additional nets should be set up for the second session of netting.

A minimum of three Area Search routes are also laid out; at least one including the area of the nets. During the Inventory, effort should be spread around the routes as evenly as possible. After dark, at least one Area Search route should be surveyed for nocturnal birds. Tape recordings of common owls and rails can be used to attract birds as part of this survey. If available, two nets can be placed with a continuous tape player going during the entire night, and checked at least at bed time and when people first wake up. Most owls are caught within an hour or so of dusk and dawn. These nets can be part of the ROI array, but should be as upland as possible and definitely away from the open water of streams or ponds, as bats would be very likely to be captured at these sites.

The vegetation assay method, as used in point counts, should be conducted in the area of the net sites. If time permits, it should be done at six stations, but in no case should there be less than four, and they should not be closer than 100 m apart.

The site must be plotted on a USGS 7.5 minute topographical map, and directions, including mileages, written with enough detail that the site can be located by a person who has not been there before. A site map must also be drawn as much to scale as possible, and with enough detail that the nets could be set up in exactly the same locations in subsequent years by a person who has not previously been to the site.

Personnel

Two people are minimum, at least one a primary bander and at least one very familiar with plumages and vocalizations of the birds.

Site Selection

The priority for sites are riparian habitats, both along streams and in meadows. They should be located where large numbers of birds can be captured, and thus would usually involve these habitats. If one finds by late morning very few birds have been captured (e.g., less than 10), consider leaving the site as a one-day ROI, but preferably consideration should be given to markedly increasing the number of nets.

These sites should be selected in locations according to the following priority:

A - Sites operated in previous years as constant effort sites, but not operated in this year.

B - Sites in similar habitat to ongoing constant effort sites, and within 10 km of these sites.

C - Sites in appropriate habitat, but located more than 10 km from a constant effort site. In this case it would be best to pair the ROI site with another for better comparisons.

Schedule

Below is the number of person-hours shown in each column for a total number per day.

Time	Person		
	A	B	
<u>Day 1</u> (A total of three hours per person)			
1600-1700	1	1	Choose a minimum of six or eight, and preferably ten net sites.
1700-1800	1	1	Each person set up 3-5 nets.
2000-2030	1		Set up three area search routes.
sunset +15		1	Conduct two nocturnal area searches or use owl tape.
<u>Day 2</u> (A total of nets operated for 6 hours in the a.m. and 4 hours in the p.m.)			
dawn	4	5	Set up and run nets
dawn +15		x	Conducts area search
ca. 0830	x		Conducts area search
ca. 1000			A takes break for 1 hour while B runs nets
ca. 1100			A nets until 1200
			B conducts 20-minute area search and then takes break until 1500
ca. 1200	1		A furls nets and takes break until helping B set up nets at 1500
sunset-4 hrs.	1	3	Both open and B operates nets
		1	Sets additional nets, maps site, check data, conducts vegetation surveys at net sites, and does area searches.
after dark	1		Conducts two nocturnal area searches or owl survey.
<u>Day 3</u> (nets operated for 5 hours)			
dawn	4	4	Set up and run nets (each takes 1 hour break)
dawn +15		x	Conducts area search
ca. 0830	x		Conducts area search
1100-1200	1	1	Nets taken down