MNBBA: Suggestions for Surveying an Atlas Block

Once you have decided on a block, download a map and aerial photograph. Delineate blocks of habitat including: different types of forest; different types of agricultural fields such as fallow fields, pastures, row crops and ploughed fields; and different types of wetlands including sedge meadows, cattail marshes, open water, lake bays, riverine habitats, etc. Circle these different habitats with a colored pencil/pen on the map ahead of your visit and any unusual features that stand out such as parks, bridges, farmsteads, cemeteries, grain elevators, coniferous groves, orchards, etc. Plan to check all of these as you drive around your atlas block. A good rule of thumb is to stop every half mile within a similar habitat and listen and observe for several minutes much like a Breeding Bird Survey route. If you continue to find new species in a similar habitat continue birding that habitat until you stop recording new species, then move to another habitat and do the same.

Agricultural areas: these areas range from black earth "deserts", like portions of the intensively-farmed Red River Valley where species totals might not exceed 30 species per block, to diverse habitats that could easily surpass 60-70 species. Road access is usually easy and one should attempt to cover most of the roads within a block. Seek out any woodlot and farmstead and bird these. Remember to ask permission to walk all around the homestead, woodlot, farm buildings (swallows, pigeons, sparrows!), small conifer trees (Chipping Sparrow), large conifers (grackles, Mourning Dove), hedgerows (thrashers, catbirds, Yellow Warbler), old trees (various woodpeckers), etc. House Finches often nest in hanging baskets. Even if permission is denied, you can bird many of these farmsteads from a public road.

Usually it's best to park out of site of the farmhouse if possible to avoid any trespassing or disturbance issues (do not trespass off public roads without permission anywhere in Minnesota unless it is known to be public land). Asking permission is often a ticket to finding out about the locations of furtive species such as owls, raptors, or gray partridge or the location of a hidden marsh over the next hill. Leaving a list of birds recorded on the property for the landowner often builds good relationships and might result in easy future access for a later confirmation should you visit the site again. Although some people will refuse you permission no matter what, most folks are only too happy to let you on their property once they understand the project. Don't be shy about asking! And talk to rural mail carriers too to see if they've spotted any goodies like Gray Partridge or Greater Prairie Chicken.

Although row crops have low avian productivity, one can often pick up Vesper Sparrows and occasional Savanna Sparrows and the very occasional Upland Sandpiper. Alfalfa fields are always worth checking for Bobolinks, occasional Dickcissels, and various sparrows. Fallow fields, meadows, and pastures are key areas for many grassland species from Killdeers to Brewer's Blackbirds. Sedge Wrens, Bobolinks, Dickcissels (southern half of state), and meadowlarks are often in CRP (Conservation Reserve Program) fields of tall planted grass or remnant prairie areas. Many farmsteads will have birdhouses, an often slam dunk for Eastern Bluebirds, House Wrens, House Sparrows, and occasionally Purple Martins. Ploughed fields will likely produce Killdeers, Horned Larks, and Vesper Sparrows. Bridges in farm country will often have a duck or two, even on channelized streams and

associated Cliff Swallows, Barn Swallows, or the less common Northern Rough-winged Swallows. More wooded areas with bridges will produce Eastern Phoebes.

Cottonwood-lined streams and rivers in farm country can be very productive with cuckoos, raptors, orioles, and various woodpeckers all possible. There are sometimes two types of shelterbelts, claimbelts which mark the original homestead with larger and often dying cottonwoods and other large trees and more modern shelterbelts with a variety of scrub bushes, cedar and other coniferous trees, and a variety of hardwoods. It's not unusual to find 5-15 species in these belts on a single farm. The older claimbelts may have higher diversity and often harbor various woodpeckers, White-breasted Nuthatchs, Tree Swallows, and even raptors such as American Kestrels.

Urban areas: many urban areas can produce species lists in the 30-50 species range. Check the more industrialized areas for the trio of introduced species such as Rock Pigeons, European Starlings, and House Sparrows. Check downtowns in small towns for Chimney Swifts and in the late evening for Common Nighthawks. Always check the vicinity of grain elevators for a trio of doves including the introduced but still local Eurasian Collared Dove. Driving urban streets will produce a variety of common species. Be sure to check out older home and yards with older mature trees, visible birdhouses, and any active feeders. Check any park on your map, especially ones that might have a lake or a river running through it. Urban lakes often have more birdlife that one would initially expect. Various swallows forage over the water, kingfishers and Spotted Sandpipers may utilize the docks or shoreline, Green Herons and Great Blue Herons and various ducks and even loons may forage in quiet bays and backwaters. Be sure to bird such areas very early in the morning, preferably on a weekday, when boating disturbance is at a minimum.

Wetlands: many wetlands have a variety of microhabitats best visited by canoe or boat. If you have this capability be sure to check out a public access site ahead of survey work to ease your birding efforts. Many medium to-large lakes in the state have public access sites where one can leave a car and launch at the very least a canoe or small motorcraft. Seek out marshes and wetlands with flowing streams and a variety of open water and channels for best results. Such marshes usually contain a higher diversity than pure stands of cattail with no open water. Check the higher grassy edges of marshes too for breeding shorebirds and waterfowl. Some species like Black Terns and Eared Grebes will breed on floating mats of vegetation so carefully scope any clumps of vegetation in floating mats which might indicate a bird nest. Species like Red-necked Grebes often hunker down low to the water and only the sharp-eyed will spots these species sitting on active nests.

Specialized wetlands like bogs and quarries are often gold-mines for breeding birds. Belted Kingfishers and Bank Swallows may utilize the side of the quarries for their hole nests while the often marshy floor of such sites may harbor both Killdeers and Spotted Sandpipers. Sedge meadows, a common habitat in the northern half of the state, can appear relatively birdless during midday but locally some of Minnesota's most sought after birds like Yellow Rail and Le Conte's Sparrow will make themselves known come early evening or after sundown. Don't ignore sewage ponds wherever you are. Swallows, waterfowl, grebes, phalaropes, and many other species and families will inhabit these often treasure-troves for birding. Access to these ponds may be a problem. Request permission and if denied, try to at least see what you can see from a nearby rise or hilltop or road edge.

Managed wetlands present various challenges for birders. Some may be seasonally flooded or dry and perfect a few weeks or even a year later. Ask wildlife area managers for information on drawdowns, floodings, or even burnings which may create specialized habitat conditions and attract some rare species.

Bogs: in southern and central Minnesota tamarack and cedar bogs often harbor species far south of their normal breeding range. Northern bogs are more difficult places to work. Special caution is necessary if surveying these areas. Some people may find it easier to strap on snowshoes (bear paw-type is best) for easier walking ability in situations where the bog may be too spongy or wet to walk in without some type of assistance.
Be sure to scan carefully the low vegetation and tamarack or spruce tree tips along the open bog edge for Olive-sided Flycatchers, Palm Warblers, Merlins, and northern finches in northern Minnesota.

Forested Areas: likely to prove the most diverse of any Minnesota breeding bird habitats, forests in Minnesota run a gamut from 100-foot tall bottomland cottonwoods to scraggly-scrub locust and aspen growing out of rock or cliffsides. If you have a block with heavy forest cover try to delineate different patterns of forest cover on the aerial photographs and then field check them to see if there is a qualitative difference on the ground. Often different age structures of the same forest species will produce different arrays of birdlife. Seasonality can affect this too. Scrubby, dense aspen groves that harbor only a few species in early June as breeding species may harbor foraging young of many more species later in the summer so be sure to recheck such areas. If your block has a variety of topography be sure to check different elevations of forest such as bottomland, mesic, and dry upland sites as well as any forested edges to lakes and wetlands and isolated groves of trees which raptors often favor. Small rocky streams can harbor Louisiana Waterthrush in eastern and southeastern Minnesota along with possible Acadian Flycatchers where canopy coverage is high. Many forested blocks in the transition zone in north central or northeastern Minnesota may harbor 80 or more species. Don't ignore wetlands and ponds in these forests which often have breeding mergansers, rails, Ring-necked Ducks, or Common Goldeneyes present. If you are fortunate to have a block with state or federal lands, be sure to walk a distance offroad where road noise is less and the chances for some breeding species much higher.

Late season tricks: after the breeding season it is still possible to confirm species as breeding by finding old, used nests. One of the easiest to confirm is the hanging basket of the Baltimore Oriole which will often last until well into the winter. Eagle and osprey nests are most obvious when the leaves are off the trees. If you are unsure which species of raptor made the nest GPS the location and return the following year or ask a nearby resident if they know what lives there. Cliff Swallows and Barn Swallows have distinct nests that readily persist over the winter if sheltered under bridges and viaducts. Learn their shapes for an easy confirmation.

Cautionary note: Take care not to disturb bird nests when confirming species identfication. Take a quick look to confirm a nest (e.g. raise the top on a bird house or flush an adult off a nest to clinch the species) and then be out of there quickly and get on to the next site. Try not to create a predator path to a breeding ground-

nesting bird by stomping down the protective vegetation. Observe nests at a distance with a scope. Patience will pay off most of the time. If you come across a colonial nesting species such as a heronry or pelican colony, observe from a distance. A second visit will often result in visible large young making it easy to confirm such species.

How much time to spend in a block? For most blocks in agricultural landscapes three site visits totaling 12-15 hours should suffice although the more diverse landscapes may require as many as 4-5 visits and 30+ hours. Depending on the diversity of habitat and the results of repeated visits to the same habitat type, the number of visits should not need to be more than 3-4 spread out over the spring and summer season with a total of 15-20 hours, more if additional species are continuing to be found. Observers may wish to return to the block in a later year but many birders travelling to distant blocks may only be able to spend 1-2 visits at a block. Depending on the birder's skills, a single visit may still produce a very decent "present" or "probable" list that hopefully can be revisited at a later time to raise the confirmation total.

If you live in a priority or even a non-Priority Block you have the luxury of having 5 years to cover the block thoroughly and such coverage may reach 90% + of the expected species with a high confirmation percentage. Studies have shown it is virtually impossible to find 100% of all of the species present. Different observers have different talents in finding certain rare species and some species such as Long-eared Owl and Common Nighthawk are very hard to confirm in some habitats. A block showing 75% or more of the expected species can be considered a completed block and observers should move onto a new Priority Block to help complete the atlas project. Observers living in a non-Priority Block are encouraged to cover their home block but to also adopt a nearby Priority Block as well to make a larger contribution to the project. Don't forget to consider covering a block when on vacation at your summer cabin or at a northern Minnesota vacation site. Boundary Water Canoe Area canoeists will be especially welcome to cover remote sites in the Superior National Forest.