**Singing Insects: Conservation Concerns (30 minutes)**

Title slide

Singing Insect Groups: Define singing insects – roughly 100 species in the region, at least historically

Map of region: I am surveying these species in a 22-county region that largely overlaps the Chicago Wilderness area.

Common widespread crickets: fall field cricket, striped ground cricket, Forbes’s tree cricket. All of these live in common, large-area habitats, are to some degree habitat generalists, and are strong dispersers, quickly moving into new habitats.

Common widespread katydids: short-winged meadow katydid, sword-bearing conehead, greater angle-winged katydid

Common widespread examples of grasshopper and cicada species: Carolina grasshopper, Linne’s cicada

Relatively common habitat specialists (extensive habitats or strong dispersers): confused ground cricket, pine tree cricket, seaside grasshopper (on IN threatened list, but common on Lake Michigan beaches; note different colors from Illinois Beach SP and Indiana Dunes NL)

Uncommon habitat specialists: prairie cicada (low dispersal ability; not on all original prairie fragments because of extinction events?); sphagnum ground cricket, melodious ground cricket (habitat islands widely spaced)

Wetland species (moving around the region, the single factor that concerns me most is wetland habitat degradation): black-legged meadow katydid (one extreme, tolerant of degraded and marginal wetlands)

Slightly musical conehead (not found in invasive-dominated wetlands, but populations well distributed in NW Indiana suggest some tolerance of marginal wetlands and good dispersal ability)

Northern mole cricket (somewhat puzzling, as the wetlands where it occurs do not seem particularly high quality; possibly another case of limited dispersal ability)

Dusky-faced meadow katydid (reportedly common in the past; I have found it in only two locations, plus a possible third, all high quality and practically devoid of invasives)

Delicate meadow katydid (the only individual I have seen to date; may be limited to interdune areas and high quality marshes close to Lake Michigan)

Stripe-faced meadow katydid (after years of searching, I finally found a group of these in an undisturbed interdune swale, and a top priority for the coming season is to intensively search such swales and get a handle on the regional abundance of this species)

Marsh conehead (these are common in Indiana Dunes marshes, but so far I have found them only there, again high quality and lacking invasives)

Nimble meadow katydid? (not found yet, but supposedly specializing in plants growing in deeper waters; status unknown; slender conehead? Also not found, may be an associate of the stripe-faced meadow katydid).

Invasive plants: I conclude that the biggest challenge to these species, and presumably a broad range of others such as the clipped-wing and Hoosier grasshoppers, is posed by the increasingly dominant invasives: reed canary grass, common reed, purple loosestrife, and hybrid cattails.

Summary points in review

Bottom line for restoration managers: remnant should be given a higher priority than restoration projects if animal as well as plant populations are to be preserved. Restoration only works for animals to the extent that they are good dispersers; many are not.

Repeat title slide

Abstract: A 22-county survey is documenting the roughly 100 species of singing insects in the Chicago region. Many of these are common and widespread, having broad habitat ranges, high reproductive capacity, and/or high dispersal ability. At the other extreme, and the focus of this presentation, are the habitat specialists, many of which either have low dispersal ability or are on habitat islands too widely spaced to permit ready dispersal. Another factor, and the biggest single conservation concern identified to date, is the reduction of wetland habitat quality by invasive plant species.

Contact: Carl Strang, cstrang@dupageforest.org