

Narrative for NABS Bluebird PowerPoint Presentation

1. **Title Slide: Welcome Back the Bluebirds!** The North American Bluebird Society (NABS) since 1978 has been instrumental in helping people all across America and Canada increase the population of bluebirds. The two bluebirds in this picture are sister and brother that were saved and raised by the founder of NABS, Dr. Larry Zeleny.
2. **Eastern Bluebird Range.** North America comprises the countries of Canada, America, Mexico and the Central American countries of Guatemala, Belize, El Salvador, Honduras, Nicaragua, Costa Rica and Panama. There are three species of bluebirds found in North America. This map shows where the Eastern Bluebird can be found.
3. **Mountain Bluebird Range.** This map shows where the Mountain Bluebird may be found.
4. **Western Bluebird Range.** This map shows where the Western Bluebird may be found. Sometimes, the three species' ranges may overlap and sometimes, different species may mate and produce sub-species that contain traits of either or both species. This confuses some people who study bluebirds.
5. **Blue Jays.** Some people confuse the Blue Jay with bluebirds but the Blue Jay is much bigger, noisier and aggressive.
6. **Indigo Buntings.** People also confuse the Indigo Bunting with bluebirds but they are a much darker blue color than bluebirds.
7. **Male Eastern Bluebird.** Bluebirds are members of the Thrush family which includes robins. The male bluebird has dark blue on his head, back wings and tail. He is reddish-brown from the chin, down over his breast and farther back along his flanks. The lower half of his belly is white.
8. **Female Eastern Bluebird.** The female has less bright plumage which helps her hide from predators when she is vulnerable during the nesting season. She is light grey tinged with blue on her head and dull brown on her back. She has blue on her tail and wings, and the blue on her wings and tail can be seen when she is flying but not always noticeable when perched. A light reddish brown color extends from the chin over the breast and back along the flanks. The belly and under-tail are white.
9. **Male Western Bluebird (close-up of throat).** Western Bluebirds have bluish throats and reddish tones on their breasts and shoulders. Their bellies and under-tails are gray, which wear down during the year to a blue-gray.
10. **Male Mountain Bluebird.** The male Mountain Bluebird lacks the reddish breast of its Eastern and Western cousins, presenting an almost pure blue appearance with a white belly.
11. **Female Mountain Bluebird.** Like the other bluebird species, the female Mountain Bluebird is less colorful, showing blue only on her wings and tail.
12. **Purple Martin in gourd.** The original people of the Americas no doubt held special regard for bluebirds, as these "harbingers of spring" probably found homes in the gourds that were set out to attract another native cavity-nester, the Purple Martin.

13. **Common Flicker.** The flicker is also a secondary cavity-nester like martins and bluebirds. It prefers tree holes on the forest edge chiseled-out by woodpeckers either previously searching for food or nesting in them.
14. **Bluebird in Natural Cavity.** This bluebird is peering out of a natural cavity. Bluebird populations increased as Europeans migrated to America and began clearing forests and turning them into pastures where bluebirds could find much more food: ground insects.
15. **Fence Post Hole.** When farmers used wooden fence posts, sometimes the location of branches made for a weaker part of the post that decayed faster allowing for bluebirds to use them for nesting sites.
16. **Human Development.** As more and more people need more and more places to live, natural places for birds to nest become scarce. It is becoming increasingly difficult for humans and wildlife to co-exist.
17. **Clearing Forests.** Dead or dying trees are considered unsightly by humans and are often used as firewood.
18. **Bluebird at Natural Cavity.** Unfortunately, these trees are the preferred sites for birds like bluebirds to nest. Besides providing nesting places, they contain many insects that birds must eat to survive.
19. **Bluebird with Insect.** All bluebirds eat large quantities of insects during warmer months, but in the winter...
20. **Winter Berries.** ...wild berries may be the birds' only link to survival. Bluebirds are not seed-eaters, so they may perish if berries become coated with ice for even a couple of days. Mealworms can be set out for bluebirds to help supplement their diet and help them survive times of stress such as severe weather.
21. **Sumac Berries.** In areas where they over-winter, bluebirds can be attracted to backyard feeders by offering pre-soaked raisins, sumac, dogwood and other berries. They will also come to feed on several kinds of berry-producing trees and shrubs as shown here.
22. **Pesticides.** Chemicals intended to kill weeds or insects may destroy the bluebird's food supplies. Some pesticides may negatively affect reproduction and may be harmful to many species besides birds.
23. **House Sparrows.** In addition to habitat loss, cavity-nesting birds were dealt another devastating blow with the introduction into North America of two bird species from Europe in the 1800's. The House Sparrow, also called English Sparrows can be deadly to bluebirds.
24. **European Starlings.** Even more aggressive and competitive are starlings. Soon after they were introduced, their population exploded across the continent.
25. **T. E. Musselman.** Mr. Musselman is considered the "Father of Bluebird Conservation" and was the first to establish "nestbox trails" in Illinois in 1934.
26. **A Nestbox Trail.** A nestbox trail is five or more nestboxes along a prescribed route that can be easily monitored on a regular basis, preferably, at least once a week during the bluebird breeding season.
27. **Nestboxes – All Shapes and Sizes.** Every bluebirder has a favorite design, size or shape but there are specifications that should not vary. NABS has a "Nestbox

- Approval Program” to encourage manufacturers to produce safe and manageable nestboxes.
28. **Nestbox Drainage.** Notice the trimmed corners of the floor which allow water to drain out.
 29. **Nestbox Ventilation.** This Peterson nestbox has three ventilation holes on each side to keep air flowing through the interior of the box on hot days making the birds more comfortable and preventing deaths due to heat stroke.
 30. **Nestbox Close-up.** Eastern and Western Bluebirds need a simple box with 4x4” or 5x5” floors and a 1-1/2” diameter entrance hole. Where the range of the Eastern and Mountain Bluebirds overlap, a larger 1-9/16” hole is recommended.
 31. **Mountain Bluebird.** These bluebirds need a larger box and entrance hole but be careful not to make the hole as large as 1-5/8” which will allow the deadly starling to enter. Western Bluebirds use the smaller Eastern Bluebird sizes.
 32. **Habitat.** Choosing appropriate habitat is just as important as providing a proper nestbox and must be considered when planning a bluebird trail. Since bluebirds feed primarily on ground-dwelling insects, they need open lawns and other areas with shorter grass.
 33. **Church Yard.** Any place that is open will work such as cemeteries, golf courses and parks.
 34. **House Sparrow on Box.** Nestboxes close to barns, stables or feedlots will suffer from stiff competition from sparrows. These areas are not good habitat for bluebirds that cannot compete with them.
 35. **Setting Out Box in Snow.** Nestboxes should be in place by late winter or early spring where there are scattered trees and perches such as a fence line. In the south, afternoon shade is an important placement consideration.
 36. **Monitoring Nestboxes.** Nestboxes should be checked weekly to protect the birds from competitors, predators and other forms of interference.
 37. **Powder Blue Eggs.** A completed nest indicates successful courtship. The female works for a few days building her nest and one bluebird egg is added each day for three to seven days until there is a complete clutch. Younger birds may have four eggs while older birds may have five or six eggs.
 38. **White Eggs.** About 5% of bluebirds have eggs that are white. Be sure not to confuse these with sparrow eggs! They hatch and produce blue bluebirds just like their colored counterparts.
 39. **Incubation.** The female starts to incubate her eggs after the last egg is laid and continues to do so for about two weeks.
 40. **Hatching.** All the eggs in a clutch will hatch within 24 hours of each other. Newly hatched, they are blind and helpless.
 41. **Brooding.** For several days after hatching, the young must be kept warm by the mother brooding or covering them the same way that she incubated the eggs. She may need to brood longer if temperatures are colder.
 42. **Feeding.** Both parents work from dawn to dusk feeding their young. After about a week, the young begin to grow feathers and open their eyes.
 43. **Nestbox Monitoring.** Records of the productivity of each nestbox should be kept. Data collected over years helps managers understand where bluebirds nest

- on trails and which boxes are better. Data can also be used by researchers such as Cornell University's Lab of Ornithology through their nestbox data program.
44. **Banding.** Between the ages of 8-12 days, trained and licensed bird banders may use special bands to give each young its unique aluminum ID number. If a banded bird is located by someone who does not band birds, the band number should be submitted to the Canadian or U.S. Wildlife Service.
 45. **Feeding Continues.** Both parents continue to provide food for the rapidly growing nestlings. Parents cling to the opening with their toes and use their tail for support. Perches should not be used on nestboxes.
 46. **Larger Young.** Each nestling may be fed as much as five times per hour. At 12 days of age, they are well developed.
 47. **Fecal Sacs.** The flash of white that may be seen leaving the nestbox with a parent is a fecal sac containing the nestlings' waste. This keeps the nestbox clean and limits the smell that attracts predators.
 48. **Nestlings.** By the 12th-15th day, the nestlings can become restless. This is the time that monitors should be very careful about opening boxes and causing the young to jump out of the box or prematurely fledge. Natural fledging takes place between the 16th and 20th day.
 49. **Fledging.** On their first outing, the fledges wear a spotted chest, the mark of the Thrush family. They keep these spots until their feathers are replaced during their first molt, which occurs in the fall. Once the young fledge, they do not return to the nestbox. Rather, they remain high in trees and are continued to be fed by parents as they gradually are taught to feed for themselves and defend themselves from various predators by learning to escape and hide. After a week or two of this training, the female begins to prepare for another nesting cycle. Nestboxes should have old nests removed because she will always build a new nest.
 50. **Nestlings.** In the northern range, bluebirds may raise only one brood. In the warmer, southern range, they may raise two or three.
 51. **Roosting.** Bluebirds over-winter in the eastern, southern and western ranges. During winter, a dozen or more often share sleeping or "roosting" quarters to conserve body heat. It helps to cover ventilation holes for boxes in northern areas where birds roost. One drain hole should be left open and the box should be reopened for spring.
 52. **Mice.** Bluebirds are not the only creatures attracted to nestboxes. In some areas, squatters include deer mice and white-footed mice. Their urine causes the wood to rot and nails to rust. The presence of mice can be a health hazard to humans so; removal of mice and their waste should be done with care.
 53. **Red Squirrel.** The acrobatic red squirrel can climb up un-guarded nestboxes or drop to it from over-hanging tree limbs to eat eggs or young.
 54. **Raccoons.** Where raccoons are found (practically everywhere), the mounting of nestboxes on fence posts is a virtual stepladder for them to feed on bluebirds.
 55. **Cats.** Both house and wild, feral cats are big predators of bluebirds. Cats should be kept indoors
 56. **Pole Mount.** To reduce predation, a free-standing pole mount is necessary in most areas. Attached to these boxes is the Kingston Stove-Pipe guard, the most

- effective way to keep snakes and other predators from eating bluebirds and their young or eggs.
57. **Grease.** Some people apply grease to the pole to deter some predators and to keep fire ants (found in the southern range) out of the nestboxes.
 58. **Zeleny Cone.** Another effective guard is the metal cone. It is almost as effective as the Kingston Stove-pipe guard except that the largest snakes (over four feet) may defeat it.
 59. **Noel Guard.** This entrance extended prevents many predators, especially, avian ones from reaching into the nestbox for meals.
 60. **Snake Guard.** The Kingston Stove-pipe guard like any guard should be mounted as high as possible near the base of the nestbox.
 61. **Wasps.** Another competitor for nestboxes is the paper wasps. Once they are allowed to build their paper nests, bluebirds cannot defeat them. Some people use wax or bar soap rubbed on the ceiling to discourage wasp nests-building. If boxes are monitored weekly, removal of nests built by one or two wasps that are not yet aggressive will allow bluebirds time to take over the box where the birds can effectively prevent wasps from coming back.
 62. **Tree Swallows.** There are other native, desirable birds that compete with bluebirds for nestboxes. Tree Swallows are the most common cavity-nesting bird in the northern range of the bluebird.
 63. **Violet-Green Swallow.** In the western range, this species of swallow will use nestboxes.
 64. **Nestbox Pairing.** Nestboxes placed between 5 and 25 feet of each other allows many species to co-exist. In areas of high swallow density, placing boxes back-to-back may be effective.
 65. **Swallow Eggs.** Tree Swallows build grass nests similar to bluebirds except that they are lined with feathers.
 66. **Chickadee Nests.** Chickadee nests are made of green moss and the nest cup is lined with very fine animal hair or fur. The eggs are half the size of bluebird eggs and speckled brown.
 67. **Tufted Titmouse.** A cousin of the chickadee, that also lives in mature woodlots in the southern range, this bird also nests in boxes and add a layer of leaves to their nests. These birds do not have black caps like the chickadee but have head tufts or pointed crowns (like Cardinals).
 68. **Brushy Areas.** Where nestboxes are placed can determine which species will use it. Chickadees, wrens and titmouses will favor placement in thick vegetation areas.
 69. **House Wrens.** One of the most aggressive competitors of bluebirds is the notorious House Wren found in the northern range. They will sometimes puncture bluebird eggs or physically remove young from nestboxes in order to rid them from their territory. Wrens are just as protected as bluebirds so; the best way to discourage them is to keep boxes out in the open.
 70. **White-breasted Nuthatch.** Other birds use nestboxes in certain regions such as this nuthatch.
 71. **Great-crested Flycatcher.** If the entrance hole is large enough (1-9/16ths") this flycatcher will nest.

72. **Public Enemy #1.** By far, the most challenging competitor for bluebird nesting sites is the non-native, unprotected House Sparrow. They will take over trails that are unmonitored and unprotected. Since these pests prefer “hand-outs” for food such as agriculture areas and fast-food restaurants, they may not be found in woods trails.
73. **House Sparrow Nest.** The nest of the House Sparrow is weaved of coarse grass. They are technically members of the weaver finch family of birds. Sparrows completely fill the nestbox cavity producing a tunnel entrance to the nest cup. Their strong seed-cracking beak is used to puncture bluebird eggs and kill bluebird young and parents alike. Sometimes, as in this case, the remains of bluebirds are weaved into their bulky nests.
74. **Removing Sparrow Nests.** Simply removing sparrow nests may not be enough to discourage them from nesting. It may sometimes serve to provoke the sparrows to attack nearby bluebirds. Trapping and disposing of sparrows is often a “necessary evil” practice in bluebird management.
75. **Larry Zeleny.** Dr. Lawrence Zeleny founded NABS in 1978. Today, there are over 40 regional or state and provincial organizations that are NABS affiliates.
76. **Nestbox Building Programs.** One of the most effective ways to teach children about nestboxes for birds is to let them build their own box, mount it and manage it.
77. **Adults, too!** Adults can learn just as well as children. ☺
78. **Bluebird Trails.** Trails can serve as wonderful training tools for various groups.
79. **Kiosks.** Where trails are located in public areas (like parks or golf courses), a very effective educational tool is a kiosk which contains information and pictures about bluebirds and the surrounding trail of nestboxes.
80. **Store-bought Nestboxes.** If you don’t want to build your own, you can buy nestboxes from a variety of stores but be sure that they meet the minimum requirements for bluebirds. Unfortunately, many boxes available at stores are NOT suitable for wildlife.
81. **The Mad Bluebird.** If you provide suitable nesting opportunities for bluebirds, they will not be mad at you!
82. **For More Information,** contact NABS at their website, www.nabluebirdsociety.org. Good luck with your bluebird nestbox or trail!