

= Indigo bunting =

The indigo bunting (*Passerina cyanea*) is a small seed @-@ eating bird in the family Cardinalidae . It is migratory , ranging from southern Canada to northern Florida during the breeding season , and from southern Florida to northern South America during the winter . It often migrates by night , using the stars to navigate . Its habitat is farmland , brush areas , and open woodland . The indigo bunting is closely related to the lazuli bunting and interbreeds with the species where their ranges overlap .

The indigo bunting is a small bird , with a length of 11 @.@ 5 ? 13 cm (4 @.@ 5 ? 5 @.@ 1 in) . It displays sexual dimorphism in its coloration ; the male is a vibrant blue in the summer and a brown color during the winter months , while the female is brown year @-@ round . The male displays brightly colored plumage during the breeding season to attract a mate . Nest @-@ building and incubation are done solely by the female . The diet of the indigo bunting consists primarily of insects during the summer months and seeds during the winter months .

= Taxonomy =

The indigo bunting is included in the family Cardinalidae , which is made up of passerine birds found in North and South America , and is one of seven birds in the genus *Passerina* . It was originally described as *Tanagra cyanea* by Linnaeus in his 18th @-@ century work , *Systema Naturae* . The current genus name , *Passerina* , is derived from the Latin term *passer* for true sparrows and similar small birds , while the species name , *cyanea* , is from the Latin word meaning dark or sea blue .

The indigo bunting is closely related to the lazuli bunting and interbreeds with the species where their ranges overlap , in the Great Plains . They were declared to form a superspecies by the American Ornithologists ' Union in 1983 . However , according to sequencing of the mitochondrial cytochrome @-@ b gene of members of the genus *Passerina* , it was determined that the indigo bunting and lazuli bunting are not , in fact , sister taxa . The indigo bunting is the sister of two sister groups , a ? blue ? (lazuli bunting and blue grosbeak) and a ? painted ? (Rosita 's bunting , orange @-@ breasted bunting , varied bunting , and painted bunting) clade . This genetic study shows these species diverged between 4 @.@ 1 and 7 @.@ 3 million years ago . This timing , which is consistent with fossil evidence , coincides with a late @-@ Miocene cooling , which caused the evolution of a variety of western grassland habitats . Evolving to reduce size may have allowed buntings to exploit grass seeds as a food source .

= Description =

The indigo bunting is a smallish songbird , around the size of a small sparrow . It measures 11 @.@ 5 ? 15 cm (4 @.@ 5 ? 5 @.@ 9 in) long , with a wingspan of 18 ? 23 cm (7 @.@ 1 ? 9 @.@ 1 in) . Body mass averages 14 @.@ 5 g (0 @.@ 51 oz) , with a reported range of 11 @.@ 2 ? 21 @.@ 4 g (0 @.@ 40 ? 0 @.@ 75 oz) . During the breeding season , the adult male appears mostly a vibrant cerulean blue . Only the head is indigo . The wings and tail are black with cerulean blue edges . In fall and winter plumage , the male has brown edges to the blue body and head feathers , which overlap to make the bird appear mostly brown . The adult female is brown on the upperparts and lighter brown on the underparts . It has indistinct wing bars and is faintly streaked with darker markings underneath . The immature bird resembles the female in coloring , although a male may have hints of blue on the tail and shoulders and have darker streaks on the underside . The beak is short and conical . In the adult female , the beak is light brown tinged with blue , and in the adult male the upper half is brownish @-@ black while the lower is light blue . The feet and legs are black or gray .

= Distribution and habitat =

The habitat of the indigo bunting is brushy forest edges , open deciduous woods , second growth

woodland , and farmland . The breeding range stretches from southern Canada to Maine , south to northern Florida and eastern Texas , and westward to southern Nevada . The winter range begins in southern Florida and central Mexico and stretches south through the West Indies and Central America to northern South America . It has occurred as a vagrant in Antigua and Barbuda , Barbados , Denmark , Ecuador , Germany , Iceland , Ireland , Netherlands , the Netherlands Antilles , Saint Pierre and Miquelon , Serbia and the United Kingdom .

= = Behavior = =

The indigo bunting communicates through vocalizations and visual cues . A sharp chip ! call is used by both sexes , and is used as an alarm call if a nest or chick is threatened . A high @-@ pitched , buzzed zeeep is used as a contact call when the indigo bunting is in flight . The song of the male bird is a high @-@ pitched buzzed sweet @-@ sweet chew @-@ chew sweet @-@ sweet , lasting two to four seconds , sung to mark his territory to other males and to attract females . Each male has a single complex song , which he sings while perched on elevated objects , such as posts , wires , and bush @-@ tops . In areas where the ranges of the lazuli bunting and the indigo bunting overlap , the males defend territories from each another . Migration takes place in April and May and then again in September and October . The indigo bunting often migrates during the night , using the stars to navigate . In captivity , since it cannot migrate , it experiences disorientation in April and May and in September and October if it cannot see the stars from its enclosure .

= = = Breeding = = =

These birds are generally monogamous but not always faithful to their partner . In the western part of their range , they often hybridize with the lazuli bunting . Nesting sites are located in dense shrub or a low tree , generally 0 @.@ 3 ? 1 m (0 @.@ 98 ? 3 @.@ 28 ft) above the ground , but rarely up to 9 m (30 ft) . The nest itself is constructed of leaves , coarse grasses , stems , and strips of bark , lined with soft grass or deer hair and is bound with spider web . It is constructed by the female , who cares for the eggs alone . The clutch consists of one to four eggs , but usually contains three to four . The eggs are white and usually unmarked , though some may be marked with brownish spots , averaging 18 @.@ 7 mm × 13 @.@ 7 mm (0 @.@ 74 in × 0 @.@ 54 in) in size . The eggs are incubated for 12 to 13 days and the chicks are altricial at hatching . Chicks fledge 10 to 12 days after hatching . Most pairs raise two broods per year , and the male may feed newly fledged young while the females incubate the next clutch of eggs .

The brown @-@ headed cowbird may parasitize this species . Indigo buntings abandon their nest if a cowbird egg appears before they lay any of their own eggs , but accept the egg after that point . Pairs with parasitized nests have less reproductive success . The bunting chicks hatch , but have lower survival rates as they must compete with the cowbird chick for food .

= = = Diet = = =

The indigo bunting forages for food on the ground or in trees or shrubs . In winter , it often feeds in flocks with other indigo buntings , but is a solitary feeder during the breeding season . During the breeding season , the species eats insects , seeds and berries , including caterpillars , grasshoppers , spiders , beetles , and grass seeds . The seeds of grasses are the mainstay of its diet during the winter , although buds , and insects are eaten when available . The young are fed mainly insects at first , to provide them with protein . The indigo bunting does not drink frequently , generally obtaining sufficient water from its diet .

= = Status = =

The species is classified as being of least concern according to the IUCN , with an estimated range of 5 @,@ 900 @,@ 000 km² (2 @,@ 300 @,@ 000 sq mi) and a population of 28 million

individuals . Global population trends have not been quantified , but the species is not believed to approach the thresholds for a population decline warranting an upgrade in conservation status . The criteria for a change in conservation status are a decline of more than 30 % in ten years or over three generations .