Identification Guide

Medium- to Large-sized Stick Nests Found in Forested Habitats within the Southern Interior of British Columbia

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Introduction

This guide was developed to assist forestry personnel with the identification of common medium- to large-sized stick nests that may be encountered in forested areas of the Southern Interior of British Columbia. Small stick nests (e.g., Sharp-shinned Hawk, crow, songbirds) are not included because, despite their considerable diversity, it can be difficult to differentiate the nest of one bird species from another.

The information included in this guide was obtained from several sources including conversations with species experts, published scientific papers, unpublished technical reports, reference books, and various websites. It is important to note that this guide was designed to be simple and easy to use. It does not provide an exhaustive literature review for each species or its habitat preferences. A variety of published and unpublished documents are available and can be consulted if you require additional information on a particular species or its habitat.

Key identification characteristics are described for ten species that inhabit forest and range habitats in the Kamloops BCTS business area. Also included are photos of the bird and example nest structures, and vocalization descriptions with sound files. Species with similar nest characteristics are identified for cross-referencing purposes to help users of this guide distinguish one nest from another. Please note, the PDF Expert app is required to play the vocalizations on an iPad.

If you encounter a medium or large stick nest, record the GPS location and estimate the approximate dimensions of the nest. Take photos of the nest and any feathers or other sign at the base of the nest tree (e.g. prey remains, bird droppings). Consult with a Registered Professional Biologist to help you identify the species.

I am very grateful to those individuals who helped develop this guide, or contributed their images. In particular, I acknowledge Moretta Shuert, Jared Hobbs, Ontario Ministry of Natural Resources (for all artistic renditions of nests © Queen's Printer for Ontario, 1998), Justin Crom, Todd Schroeder, and Allan Claybon.

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Identification Guide for Medium- to Large-sized Stick Nests

Haliaeetus leucocephalus

Photo: Chris Gill

NEST DESCRIPTION

- Nest tree size, form, and location are more important than tree species. Nest trees are usually dominant or co-dominant specimens (in size) in the stand in which they occur, have sturdy branches and an open branch structure, and are located near a lake, river, or wetland.
- Nests are very large structures (diameter: 0.8–1.4 m; depth: 0.4–0.9 m), located below the tree crown in a large fork (average nest height: 12–18 m).
- Nests are reused year after year but there are often one or more alternate nests within a territory.

SIGN

- White wash (bird droppings) around base of tree
- Prey remains around the base of the nest tree (fish, waterfowl, and mammals are most commonly found)
- Feathers

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Bald Eagle

SPECIES DESCRIPTION

Photo: Ken Thomas (Wikimedia)

- Very large raptor with long, broad wings, an unmistakeable white head and tail, and a heavy, yellow beak (length: 79–94 cm; wingspan: 178–229 cm)
- Juveniles are mostly brown with a black beak and mottled white on the body and wings.
- Typically inhabits forested areas with tall, mature, coniferous or deciduous trees for perching, close to large bodies of water, including bays, rivers, and lakes.
- Found in almost all habitats from sea level to 1,370 m.

VOCALIZATION

Usually a series of high-pitched whistling or piping notes.

SPECIES WITH SIMILAR NEST CHARACTERISTICS

- Osprey; nest is always located at the very top of a large tree or manmade platform

Pandion haliaetus

Photo: Chris Gill

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NEST DESCRIPTION

- Nest trees can be either living or dead and include mature black cottonwood or large coniferous species such as Douglas-fir situated near lakes or rivers (average nest height: 9–18 m). Manmade nest platforms such as power poles are also commonly used.
- The nest is always located at or near the very top of the nest tree or manmade structure.
- Nests may be compact or large, bulky structures comprised of sticks, branches, and twigs (diameter: 0.6–2.3 m; depth: 0.3–1.7 m).
- Breeding pairs return to the same nest in subsequent years.

SIGN

- Fish remains present around the base of the nest tree
- Feathers

SPECIES DESCRIPTION

Photo: Ken Thomas (Wikimedia)

- Large raptor with long, narrow wings and long legs (length: 56–64 cm; wingspan: 147–183 cm)
- Smaller than a Bald Eagle but larger than a Red-tailed Hawk.
- Sexes are generally similar in colouration: underparts are white and back and top of wings are brown.
- Head is white with a broad, brown stripe through the yellow eye.
- Black, sharply hooked beak.
- Wings are kinked during flight, making an 'M' shape when seen from below.
- Habitat is primarily along rivers, lakes, and reservoirs.
- Breeds from sea level to 1,070 m elevation.

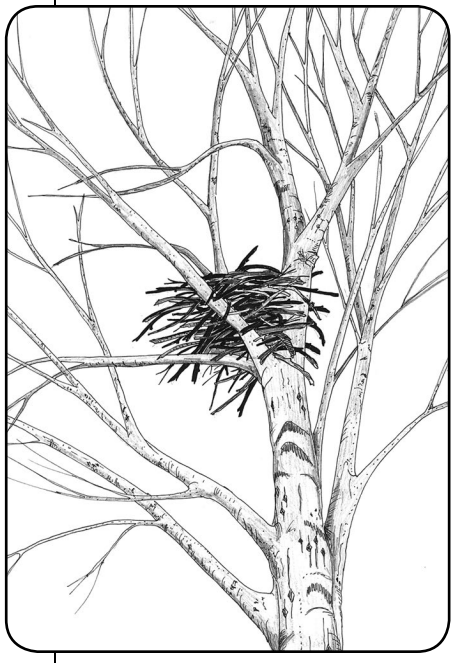
VOCALIZATION

Slow, high-pitched chirps.

SPECIES WITH SIMILAR NEST CHARACTERISTICS

- Bald Eagle; nest is usually located below the tree crown in a large fork.

Corvus corax



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NEST DESCRIPTION

- Nests in living coniferous trees (primarily Douglas-fir) and on man-made structures.
- Tends to nest in a large, mature tree with a thickly branched crown (usually the tallest tree in the area).
- Nests are situated below the crown of the tree and on a branch adjacent to the trunk (average nest height: 12–24 m).
- Nests are bulky platforms of short, coarse sticks and twigs (diameter: 0.5-1.5 m; depth 0.3-0.45 m)
- Nests are frequently reused.

SIGN

- Old egg shells on the ground near base of nest tree
- White wash (bird droppings) around base of tree
- Feathers

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Photo: Donar Reiskoffer (Wikimedia)

SPECIES DESCRIPTION

- Large, black bird with a glossy, metallic sheen to its plumage; thick neck; long, thick beak; and a long, wedge-shaped tail (length: 55–69 cm; wingspan: 116–118 cm).
- Found in a variety of habitats, from open country to forested regions and from valley bottom to alpine.
- Found breeding at elevations from sea level to 1,320 m.

VOCALIZATION

A very hoarse, low-pitched “croak” or guttural “caw” that is much deeper in tone than a crow.

SPECIES WITH SIMILAR NEST CHARACTERISTICS

- Great Gray Owl and Great Horned Owl; look for owl pellets that contain bones at the base of the nest tree.
- Northern Goshawk; nests are located in dense forests away from forested edges.
- Red-tailed Hawk; nests are often well-concealed and situated in a fork near the tree crown.

Accipiter cooperii

NEST DESCRIPTION

- Nests are often well hidden and consist of a bulky platform of sticks, usually placed in the forks of branches, or against the main trunk.
- Most often found in coniferous trees
- Nest is lined with strips of bark, coniferous or deciduous twigs, and grasses.
- Approximate nest dimensions: diameter: 60–70 cm; depth: 15–20 cm
- Nest height is approximately 9–15 m above the ground
- Occasionally uses abandoned crow nests

SIGN

- Prey remains (bushland birds (e.g., American Robin, jays, quail) and small mammals)
- White wash (bird droppings) around base of tree
- Feathers

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Cooper's Hawk

SPECIES DESCRIPTION

- A crow-sized hawk with broad, rounded wings and a very long tail
- Tail is banded and round at the end with a broad white terminal tail band
- Adults have red eyes, a slate gray back, dark gray "cap", and a white breast marked by fine, thin, reddish bars
- Juveniles have yellow eyes, a brown back, brown "cap", and thin brown streaks on the breast

VOCALIZATION

"kek, kek, kek" (slightly higher pitched than a Northern Goshawk), usually heard around an active nest; mostly silent

SPECIES WITH SIMILAR NEST CHARACTERISTICS

- Red-tailed Hawk; nests are larger and located near forest edges
- Great Gray Owl; nests are larger. Look for regurgitated owl pellets (containing feathers, fur and bones) at the base of the nest tree
- Northern Goshawk; nests are larger

Great Blue Heron, *herodias* subspecies

Ardea herodias herodias

Photo: Allan Claybon

NEST DESCRIPTION

- Nests in colonies in relatively contiguous or fragmented coniferous or deciduous forest or in solitary trees (in a solitary tree, several nests will be present)
- In the southern interior of British Columbia, the most common nest tree species is black cottonwood. Other important tree species include Douglas-fir, western white pine, hybrid white spruce, lodgepole pine, ponderosa pine, western red cedar, and western hemlock.
- Most nests are situated 17–30 m off the ground and consist of a large, flat platform of long, interwoven sticks (diameter: < 1 m; depth: < 0.4 m).
- Old nests are often reused and added to year after year.

SIGN

- Old egg shells on the ground near base of nest tree
- White wash (bird droppings) around base of tree
- Feathers

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Great Blue Heron, *herodias* subspecies

Photo: Jared Hobbs

SPECIES DESCRIPTION

- Large wading bird (height: 60 cm: length 127–137 cm) with a long neck and legs, large, yellow or pale-coloured bill, and a blue-gray body.
- Black crown with short, black feathers extending from the back of the head.
- Flies using deep, slow wingbeats with its neck folded in an S-shape.
- Important foraging habitats include aquatic areas such as riverbanks, lakeshores, and wetlands.
- Nesting and occurrences have been documented from sea level to 1,100 m.

VOCALIZATION

A hoarse “croak”; usually silent.

SPECIES WITH SIMILAR NEST CHARACTERISTICS

- None; Great Blue Herons are the only colony nesting species found in this guide.

Great Gray Owl

Strix nebulosa

Photo: Todd Schroeder, Fall River Photography

NEST DESCRIPTION

- Nests are difficult to locate.
- Nests may be in coniferous, deciduous, or mixed woodlands and are usually in the vicinity of marshes, lakes, muskegs, wet meadows, or pastures.
- Reuses the abandoned nests of raptors such as Red-tailed Hawk or Northern Goshawk or may use parasitic vegetative growths on the tree (average nest height: 6–15 m).
- Nests are frequently reused.

SIGN

- Owl pellets; dry pellets of fur, feathers, and bones, up to 10 cm long, regurgitated by the owl and usually found at the base of the nest tree.
- Feathers

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SPECIES DESCRIPTION

Photo: Wikipedia

- Very large, gray owl with large facial disks, yellow eyes and no ear tufts (length: 61–84 cm; wingspan: 137–153 cm).
- Great Horned Owls are smaller and have ear tufts.
- Occurs in dense coniferous and hardwood forests and also in second growth forests, usually in the vicinity of water, including marshes, wet meadows, lakes, and pastures.
- Usually observed hunting along forest edges adjacent to open areas.
- Breeding confirmed at elevations from 900–1,220 m.

VOCALIZATION

A series of deep, slow, evenly spaced hoots, dropping in pitch and slowing in cadence at the end; mostly silent.

SPECIES WITH SIMILAR NEST CHARACTERISTICS

- The Great Gray Owl reuses the abandoned nests of other raptors, including Northern Goshawk (in dense forest) and Red-tailed Hawk (at or near forest edges). Look for owl pellets that contain bones (hawk pellets will be fur and/or feathers only) at the base of the nest tree.

Bubo virginianus

Photo: John Kees (Wikimedia)

NEST DESCRIPTION

- Great Horned Owls do not build their own nest but instead reuse the abandoned nests of other species (especially Red-tailed Hawk, Great Blue Heron, and Northern Goshawk) or nest in parasitic vegetative growths on the tree.
- Most nests are located in open trees but some are found in the top of a broken snag or a large tree cavity.
- Coniferous trees are generally preferred, including Douglas-fir, white spruce, and ponderosa pine.
- Nests size varies greatly depending on species and ranges from 0.3–1.5 m.
- Most nests are located in the fork of a tree, between the trunk and a horizontal branch, and usually 7–14 m off the ground.

SIGN

- Owl pellets; dry pellets of fur, feathers, and bones, up to 10 cm long, regurgitated by the owl and usually found at the base of the nest tree
- Feathers

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Great Horned Owl

SPECIES DESCRIPTION

- Large, stocky owl with a very large head, gray or brown facial disks, white throat, yellow eyes, and prominent, widely-spaced ear tufts (length: 46–63 cm; wingspan: 101–145 cm).
- Great Gray Owls are larger and do not have ear tufts.
- Present in nearly all terrestrial habitats in British Columbia but is usually found in secondary-growth woodlands, wetlands, orchards, and agricultural areas.
- Breeds at elevations from sea level to 1,220 m

Photo: Brendan Lally (Wikimedia)

VOCALIZATION

Soft, deep hoots with a stuttering rhythm, “hoo-hoo-HOOO-hoo-hoo.”

SPECIES WITH SIMILAR NEST CHARACTERISTICS

- The Great Horned Owl reuses the abandoned nests of other birds, especially Red-tailed Hawk, Great Blue Heron, and Northern Goshawk. Look for owl pellets that contain bones (hawk pellets will be fur and/or feathers only) at the base of the nest tree.

Accipiter gentilis

Photo: Chris Gill

NEST DESCRIPTION

- Nests are generally constructed in the largest trees situated in dense, mature stands of coniferous or mixed coniferous and deciduous species with high canopy closure (60-95 percent) and sparse ground cover, near the bottom of moderate slopes, and near water or dry openings.
- Deciduous or coniferous trees appear to be chosen equally; nests are commonly built in trembling aspen, Douglas-fir, black cottonwood, and spruces.
- Nests are most often found 9-12 m from the ground in the main crotch of the tree, in the forks of branches, or against the main trunk.
- Nests are fairly large and comprised of coarse sticks and twigs (diameter: ≤ 0.9 m; depth: ≤ 0.4 m).

SIGN

- Prey remains (larger birds such as grouse and/or medium-sized mammals such as rabbits or squirrels)
- White wash (bird droppings) around base of tree
- Feathers
- Plucking perches (rocks, snags, fallen logs, or low exposed tree limbs where the bird can sit and eat its prey), usually located within 75–100 m of the nest site

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SPECIES DESCRIPTION

- Large, raven-sized hawk with relatively short, rounded wings and a long tail (length: 46–66 cm; wingspan: 98–117 cm).
- Adults have a dark crown and white eyebrow, blue-gray back, dense, grey barring on white underparts, and fluffy, white feathers at base of tail.
- Prefers dense, mature, coniferous or mixed coniferous and deciduous forest habitats.
- Nests have been found from sea level to 1,400 m elevation.

Photo: Norbert Kenntner (Wikimedia)

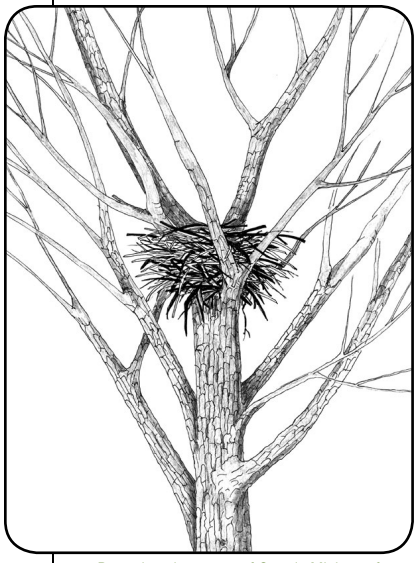
VOCALIZATION

A nasal “ka-ka-ka-ka-ka”; usually silent.

SPECIES WITH SIMILAR NEST CHARACTERISTICS

- Red-tailed Hawk; nests are located near forest edges.
- Great Gray Owl; may use abandoned Northern Goshawk nests. Look for regurgitated owl pellets (containing feathers, fur and bones) at the base of the nest tree.
- Cooper’s Hawk; nests are smaller and usually well hidden.

Buteo jamaicensis



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NEST DESCRIPTION

- Nests are usually found on or near natural or manmade forest edges.
- The nest tree is generally taller than surrounding trees.
- Black cottonwood, Douglas-fir, and ponderosa pine are the most common nest tree species, but they will also nest in trembling aspen.
- Nests are often well-concealed and situated in a fork near the tree crown (average height: 12–18 m).
- Nests are large and bulky, constructed of tall piles of dry twigs and coarse (thumb-sized) sticks (diameter: 0.4–1.1 m: depth: 0.2–1.2 m).

SIGN

- Prey remains, including small mammals (i.e., rabbits) and larger birds
- White wash (bird droppings) around base of tree
- Feathers

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SPECIES DESCRIPTION

Photo: Greg Hume (Wikimedia)

- Large, stocky hawk with broad wings and a short, broad tail (length: 48–64 cm; wingspan: 101–145 cm).
- Colouration is usually rich brown above and pale below, with a streaked belly and, on the wing underside, a dark bar between the shoulder and wrist.
- Tail is pale below and cinnamon-red above.
- Dark-phase adults are chocolate-brown with a reddish, banded tail.
- Found throughout the province in nearly every habitat type, but prefer open habitats with good hunting perches.
- Found at elevations from sea level to 2,230 m.

VOCALIZATION

A hoarse descending scream, “Kee-eeee-arr”.

SPECIES WITH SIMILAR NEST CHARACTERISTICS

- Great Horned Owl; often reuses a Red-tailed Hawk nest. Look for regurgitated owl pellets (containing mammal bones, fur, and feathers).
- Northern Goshawk; nests are similar in size but are usually found in dense forests.
- Osprey; nest is larger and located at the very top of a large tree, generally with no live branches above it.
- Bald Eagle; nests are usually larger and more conspicuous.
- Swainson’s Hawk; nest placement is usually at or near the top of the tree.

Buteo swainsoni

Photo: Justin Crom

NEST DESCRIPTION

- Nests are typically found in a solitary tree or small grove in the open upland areas of foothills and valleys (e.g., agricultural, grassland, and wetland areas) with nearby forested areas.
- Most nests are located in coniferous trees (Douglas-fir or spruce) but black cottonwood or trembling aspen are also used.
- Nest placement is usually at or near the top of the tree, averaging 14–18 m off the ground.
- Nests are large, loose bundles of sticks and twigs, approximately 0.6 m in diameter.

SIGN

- Prey remains, including small mammals (i.e., rabbits), larger birds, snakes, and carrion
- Feathers

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Swainson's Hawk

Photo: Wikipedia

SPECIES DESCRIPTION

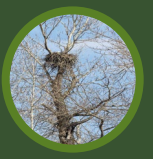
- Large hawk with long, distinctively pointed wings and a short, black- and white-banded tail (length: 48–56 cm; wingspan: 120–137 cm).
- Plumage is extremely variable; both light and dark morphs exist, although light phase individuals are more common.
- On light phase birds the pale belly and pointed wings are distinctive.
- Wings are often angled up slightly during flight (especially obvious during glides).
- Found in open mixed forests and in open areas such as rangeland, pastures, farmland, and marshes.
- Breeds at elevations from 335–457 m.

VOCALIZATION

A long, whistled "kieeeer", higher pitched and more plaintive than a Red-tailed Hawk's call.

SPECIES WITH SIMILAR NEST CHARACTERISTICS

- Red-tailed Hawk; nests are often well-concealed and situated in a fork near the tree crown.



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