

The Status of
Yellow-bellied Sapsucker
Sphyrapicus varius

In Newfoundland and Labrador



**THE SPECIES STATUS ADVISORY COMMITTEE
REPORT NO. 25**

June 21, 2010

RECOMMENDED STATUS

Recommended status: Data Deficient	Current designation: None
Criteria met: None	
Reasons for designation: Perceived rarity. Unknown trend in extent and area of occupancy. Unknown number of extant locations. Unknown number and variation of mature individuals. Unknown trend in habitat quality.	

This report was originally prepared by Michael Burzynski and subsequently edited by the Species Status Advisory Committee.

STATUS REPORT

Sphyrapicus varius (Linnaeus, 1766)
Yellow-bellied Sapsucker; Pic maculé

Synonyms:

Sphyrapicus varius appalachiensis Ganier, 1954
Sphyrapicus atrothorax (Lesson, 1831)
[TYPE is from Newfoundland (Godfrey, 1960)]
Sphyrapicus varius atrothorax (Lesson, 1831)
Sphyrapicus varius daggetti Grinnell, 1901
Sphyrapicus varius nuchalis S. F. Baird, 1858
Sphyrapicus varius ruber (Gmelin, 1788)
Sphyrapicus varius varius (Linnaeus, 1766)

Family: Picidae (Woodpeckers and allies)

Life Form: Vertebrate, Bird, Woodpecker

Systematic/Taxonomic Clarifications

Larger, lighter northern sapsuckers are sometimes identified as *Sphyrapicus varius atrothorax*, while smaller, darker southern birds are sometimes referred to as *Sphyrapicus varius appalachiensis*. However, there is a great deal of overlap between the two forms, and the species is generally regarded as monotypic (Walters *et al.* 2002). This report will therefore consider the Yellow-bellied Sapsucker at the species level only.

Distribution

Global:

North America (excluding Canada)

United States: The breeding range of this species includes Alaska, North Dakota, South Dakota, Iowa, Wisconsin, Michigan, Ohio, Pennsylvania, Maryland, New Jersey, New York, Connecticut, Massachusetts, New Hampshire, Maine, West Virginia, Virginia, Tennessee, North Carolina, Illinois, and Indiana. The winter range includes Kansas, Missouri, Illinois, Indiana, Ohio, Pennsylvania, New Jersey, New York, Maryland, Delaware, Virginia, West Virginia, Kentucky, Tennessee, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Arkansas, Louisiana, Oklahoma, and Texas. Listed as accidental or vagrant in Montana,

Colorado, New Mexico, Arizona, and California (Walters *et al.* 2002).

Mexico: Winters. (Walters *et al.* 2002)

Saint-Pierre et Miquelon (France): Rare non-breeder (Desbrosse *et al.* 1990)

Greenland: Vagrant. (Walters *et al.* 2002)

Other Continents or Individual Political Jurisdictions

Winter range extends southward into Central America, including Guatemala, Belize, Honduras, El Salvador, Nicaragua, Costa Rica, and Panama; and, also, onto many of the islands of the West Indies, including Bahamas, Cuba, Jamaica, Hispaniola (Haiti and Dominican Republic), Cayman Islands, San Andrés (part of Colombia), Puerto Rico, and the Virgin Islands. Listed as accidental or vagrant in St. Martin, Dominica, St.-Bartholémy, and the Netherlands Antilles. Also recorded as a vagrant in Bermuda, Iceland, Ireland (County Cork), and England (the Scilly Isles). (Walters *et al.* 2002).

National (See Figure 1)

Breeds in southwest Yukon; southwest Northwest Territories; northeast British Columbia; all of Alberta except southeast; northern, central, and southeastern Saskatchewan; south to central Manitoba; all of Ontario except Hudson Bay lowlands; south and central Quebec; New Brunswick; Nova Scotia; Prince Edward Island; southern Labrador; and south to central Newfoundland (Walters *et al.* 2002).

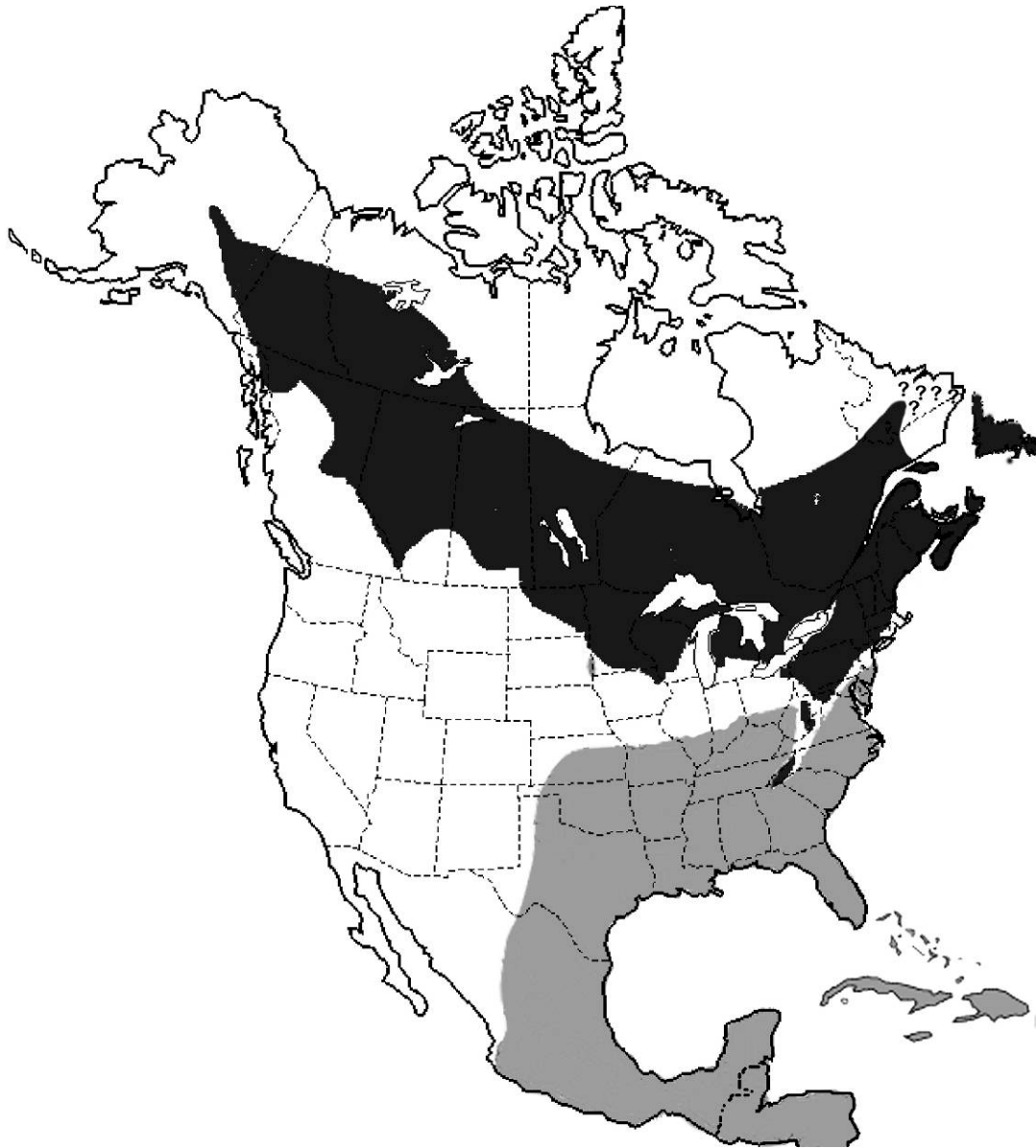


Figure 1. North American range of *Sphyrapicus varius* showing both summer (black) and winter (grey) distributions. Adapted from Walters *et al.* (2002).

Provincial (see Figure 2)

Montevecchi and Tuck (1987) list this species as a breeding migrant and as a very uncommon breeder. It is usually present in Newfoundland in spring, summer, and fall, but is less common in winter (Mactavish *et al.* 2003). In Labrador, it is reported as breeding in the lower Churchill River Valley (Gull Island/Edward's Brook/Upper Brook region) (Todd 1963, Paul Linegar, pers. com.).

The Department of Natural Resources (2003 and 2006) mentions *Sphyrapicus varius* as a characteristic forest bird in the high-boreal forest of Lake Melville (Ecoregion 6), and the mid-boreal forest of the Paradise River area (Ecoregion 7) but does not indicate the source of that information.

This species has been seen across the province. In Newfoundland, sightings have been concentrated around Deer Lake-Pasadena, Stephenville, Millertown, St. John's, as well as in Saint-Pierre et Miquelon (France). In Labrador most sightings have been around Goose-Bay. This distribution of sightings probably reflects concentrations of birdwatchers.

Drumming and other territorial and pre-nesting activity have been observed at Harpoon Brook, near Millertown (1990), and Pasadena (1973, 1991, 1996).

Nesting and young broods were observed at Nicholville (1915 and 1919), Pasadena (1973), Codroy Valley (1969), Harpoon Brook—near Millertown (1986), Swift Current (1954), and near Goose Bay (1939).

Juveniles have been reported from Bay of Islands (1889), Deer Pond (1894), Black Duck (1977), Harpoon Brook (1986), and Plum Point (2007), the Goose Bay area (1950), and Saint-Pierre (1966, 1967, 1988).

Annotated Provincial Range Map

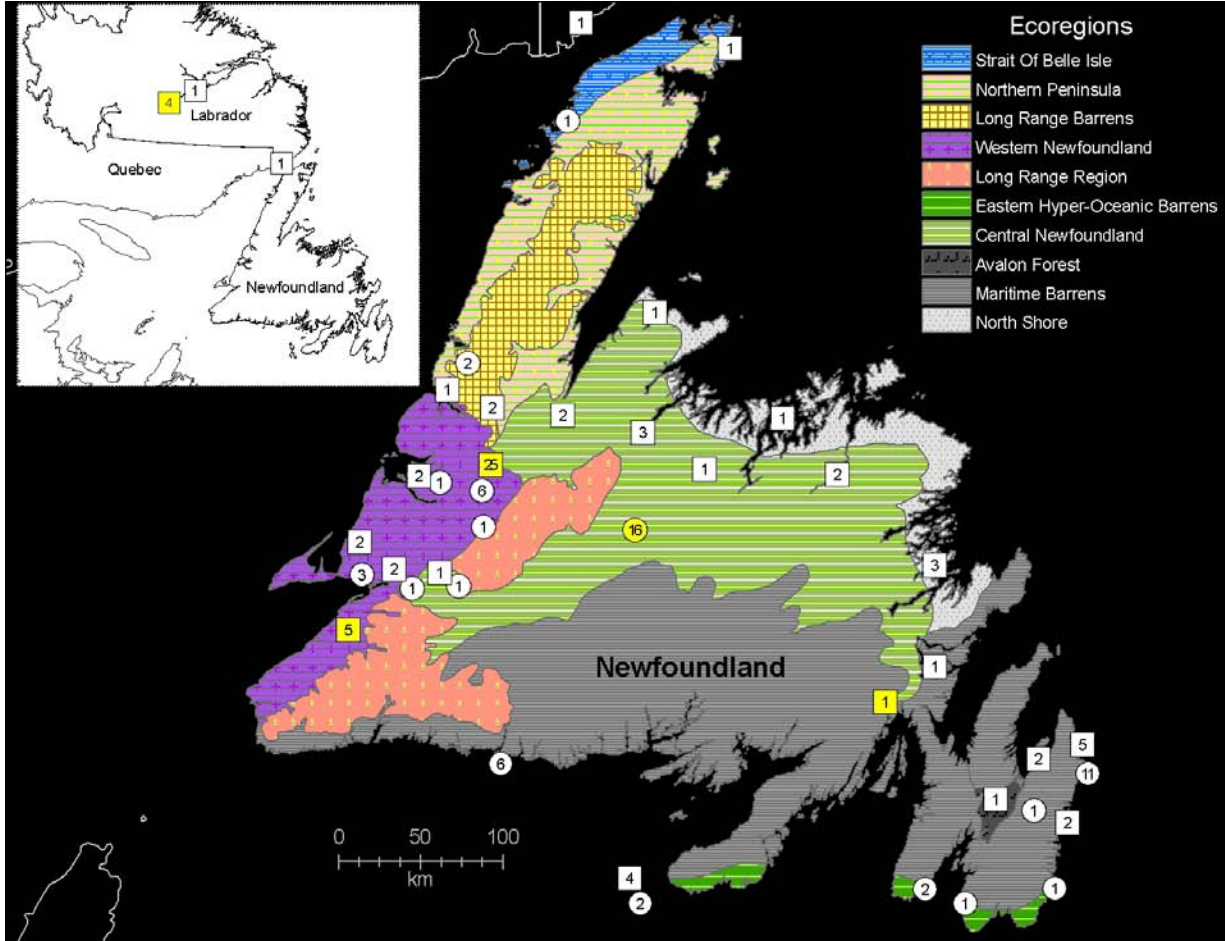


Figure 2. Distribution of *Sphyrapicus varius* collections and sightings in Newfoundland and Labrador. Numbers of birds sighted or collected before 1983 are shown within squares; records since are shown within circles. Yellow fill indicates that the records include one or more reports of nesting activity, white fill indicates a simple sighting record or specimen collection. Compiled from records in Appendix A. Ecoregions adapted from Damman (1983).

Description

Sphyrapicus varius is a medium-sized woodpecker with a short, chisel-tipped bill. Length about 20 cm and weight about 50 g (Walters *et al.* 2002). Male: the rump is white, the belly is buff or tinged with yellow, a black bib covers the upper chest, and the throat is red. The forehead and crown are red. Between the throat and crown are three black stripes alternating with two white stripes. The central black stripe includes the eye. Each wing bears a large white patch (the median and greater primary

coverts), and the back is black with light yellow bars. This is the only woodpecker with a vertical white stripe on its side (when perched). Female: similar to male, but with less or no red on forehead, and with white throat. Juvenile: brownish with white wing patch until the first molt (Godfrey 1967).

Habitat

Walters *et al.* (2002) list the potential habitats for *Sphyrapicus varius* as: coniferous woodland, hardwood woodland, mixed woodland, and mixed suburban/orchard. In Newfoundland and Labrador, it is usually found in tall deciduous or mixed forest containing birch, aspen, and poplar (Griscom 1926, Peters and Burleigh 1950). This latter forest type is most common in the valleys of central and western Newfoundland, and in Labrador's lower Churchill River valley (Paul Linegar, pers. comm.) and around Terra Nova National Park (Luise Hermanutz pers. comm.).

Sphyrapicus varius favours standing dead trees and hollow or fungus-riddled living trees for nesting, and live or diseased hardwoods and softwoods for feeding. Favourite tree species for feeding are those with the highest sap sugar content; in this province birch (*Betula* spp.) and maple (*Acer* spp.) (Walters *et al.* 2002).

Peck and James (1983) surveyed *S. varius* nesting sites in Ontario, finding 293 nests in 11 species of hardwoods, and only 6 nests in 4 species of softwoods. In New Brunswick, Gibbon (1970) found that this bird rarely nested in coniferous trees or healthy deciduous trees. Runde and Capen (1987) cored nesting trees and found that most contained fungus-decayed wood. Nest sites are usually near watercourses, where the birds may feed on swarming stoneflies and mayflies (Foster and Tate 1966). Riparian and waterway forest buffers could be an important aspect of habitat protection for this species, since they tend to concentrate wind-blown insects (Whitaker *et al.* 1999). Eberhard (1994) surveyed nests in northern Michigan, finding that *S. varius* was most abundant in second-growth forest that regenerates after timber harvesting, concluding that the species has a requirement for young forest. Most information in this province, however, suggests that the birds prefer large trees and mature forest (Griscom 1926; Peters and Burleigh 1950; Bruce Mactavish pers. comm.). Mactavish also noted that the five nests found in the Harpoon Brook area, south of Millertown, were in forest that had been clear cut, but patches of hardwoods (mostly large mature White Birch [*Betula papyrifera*] and Trembling Aspen [*Populus tremuloides*] had been left standing. The birds were most often seen in patches of mixed birch and aspen, but large expanses of almost pure birch forest along the nearby Exploits River contained very few sapsuckers. The birds were using the aspens for

feeding, and the birches for nesting. In the Maritimes, trees used by these birds for feeding are often in relatively open positions at the forest edge, in clearings, or in orchards and other open groves (pers. obs.). Whether this is also typical in Newfoundland and Labrador is not known.

Of the 13 records of nesting, the six in the Nicholsville-Pasadena area and the single Codroy nest were in the Western Newfoundland Ecoregion (Damman 1983)—which corresponds roughly with the Corner Brook Section of the Boreal Forest Region (Rowe 1972). The five Millertown area nests and the single Swift Current nest were in the Central Newfoundland Ecoregion (Damman 1983), the equivalent of the Grand Falls Section of the Boreal Forest Region (Rowe 1972), see Figure 2. All of the known nesting sites for this species on the Island of Newfoundland are within the Balsam Fir (*Abies balsamea*)-dominated “wet boreal” forest type characterized by Thompson *et al.* (2003).

The nesting and feeding habitat requirements of Yellow-bellied Sapsuckers in Newfoundland are not fully understood. Historic population density is also unknown. However, there are several historic records, especially in western Newfoundland, of multiple collections in a small area over a short period of time. This seems to indicate a greater population density in that area than occurs today. The greatest change to habitat since those collections has been the removal of much of the mature forest. During the last century, Balsam Fir-dominated forest has been cut throughout the Island of Newfoundland for pulp production, often leaving clearcuts of far greater area than typically caused by outbreaks of forest insects such as Spruce Budworm (*Choristoneura fumiferana*) and Hemlock Looper (*Lambdina fiscellaria*) (Thompson *et al.* 2003). Under current forestry practices, harvest blocks are managed on a 60-year rotation basis. Mature Balsam Fir forest (which takes 80 or more years to develop) provides a habitat type distinct from younger stands in physiology, structure, and function (Thompson *et al.* 2003). If the Yellow-bellied Sapsucker is dependent on mature forest for all or part of its nesting or feeding requirements, far less of that habitat remains. Other woodpeckers are affected by the loss of mature forest in western Newfoundland. Thompson *et al.* (2003) suggest that the reduction of this age class may be reducing the population of Black-backed Woodpeckers. The authors also state that “In Newfoundland, managers should assume that eradication of old balsam fir forest will affect the persistence of black-backed woodpeckers and other forest interior birds (Thompson *et al.* 1999), and therefore include old forests in landscape planning and management modeling to avoid loss of biological diversity (Thomas *et al.* 1988, Thompson and Welsh 1993).”

Corner Brook Pulp and Paper’s most recent Five Year Operating Plan for

Zone 6 (2008) states that it will take into account the biological importance of mature forest habitat:

“Consistent with our ecosystem policy, the province introduced into the analysis an old forest target that at least 15 percent of forests be older than 80 years. This was designed to provide a course [sic] filter approach to maintaining representative forest structure. It ensures the presence of certain amounts of old forest across the landscape into the future. With advances in modeling, this target can now be tracked across a district rather than a single ownership. This has resulted in this strategy being less restrictive than the last analysis. As well, an attempt has been made to connect these areas across the landscape for the first 25 years in the form of 81+ corridors.”

Winter habitat for the Yellow-bellied Sapsucker is not available in Newfoundland and Labrador. Sapsuckers migrate southward in autumn and winter in the southeastern and south central United States, the Caribbean islands, Mexico, and Central America (Walters *et al.* 2002). This species winters in forested habitat, feeding on sap and arthropods. Females generally move farther south than males. In Central America and the West Indies there are 3.5 females to every male (Tate 1973).

Overview of Biology

Sphyrapicus varius feeds on birch, poplar, aspen, maple, apple, and many other trees. It is able to choose trees with high sap sucrose concentrations, favouring them over trees with high sap volumes (Eberhardt 1994). Sap wells drilled by this species have been found in almost 1000 species of woody perennials (McAfee 1911, Tate 1969). Usually, each pair establishes an orchard of tapped trees.

The birds drink the sugar-rich sap, eat bast (inner bark, cork cambium, phloem and cambium (Tate 1973), and glean any arthropods that arrive to drink sap (see Figure 3). They also feed on insects away from the sap holes by probing, scaling bark, gleaning from branches and bark, pounding, and pecking. Sapsuckers will also eat fruit and berries, and have been seen caching nuts and fruit for later use. They feed their young on regurgitated arthropods, fruit and sap (Ehrlich *et al.* 1988).

The birds drill scores of holes each day to provide a sufficient flow of sap. They drill several different types of holes (Tate (1973) lists five), and at different times of the year take sap from both the phloem and the xylem of the tree; xylem sap is usually 2 to 3 % sucrose, while phloem is usually more than 10% and can reach 30% (Walters *et al.* 2002). The birds will aggressively defend their sap wells from other birds (especially

hummingbirds) and from large insects such as bees and wasps (pers. obs.).

Feeding behaviour is similar in winter, but tree sap yields less sugar at that time of year, and in northern parts of the winter range, arthropods are less available. Birds in northern areas pry bark scales off large areas of tree trunks for arthropods, eat frozen fruit, and lick sap if they can obtain it. They must search long and hard for food during the short days (Tate 1973).

Tate (1973) lists five different types of feeding holes made by this species: holes in vertical columns for sap, holes in vertical columns for cambium tissue (the soft layer of differentiating phloem and xylem cells beneath the bark, called *bast* by Tate), horizontal rows for sap, horizontal rows for bast, and spiral groups of holes (often on branches rather than trunks). The most typical feeding holes are small, oval to rectangular, shallow, regularly spaced holes in columns in thin bark. Holes are made and then tended and enlarged for several days, then they are abandoned and a new set of holes are drilled just above them. This results in columns of holes, with the most recent at the top where they partially girdle the stem and intercept the downward flowing sugar-rich phloem.

The hole clusters are easily visible on trees, the bark around them is usually dark and discoloured, and numerous flying insects visit the holes. Clusters of holes are usually located within a metre of a live branch, and in northern Michigan they average just over 7 m off the ground (Eberhardt 2000), but in New Brunswick most are lower than that (pers. obs.).

In this province there is some possibility for confusion when using feeding holes in trees to identify the presence of sapsuckers. In 2008, the marks shown in Figure 4 were found in the forest above Konrad Brook in north-central Labrador, and later that fall a string of similar holes was found near the base of a spruce in Gros Morne National Park. Neither of these sites is within the generally accepted range of *Sphyrapicus varius*. Through literature review and consultation with several birders, it is now thought that the holes were made by a Three-toed Woodpecker (*Picoides tridactylus*). An indication of the superficial similarity in feeding marks is contained in Walters *et al.* (2000): "In central Alaska, extensive tree scarring and cross-sections of old trees show feeding scars attributed to sapsuckers (Kessel 1986), but they may actually have been made by Three-toed Woodpeckers (B. Scher pers. comm.)". Ian Goudie and Bill Montevecchi found similar holes at Gamma Lake in the Long Range Mountains in June 1979.

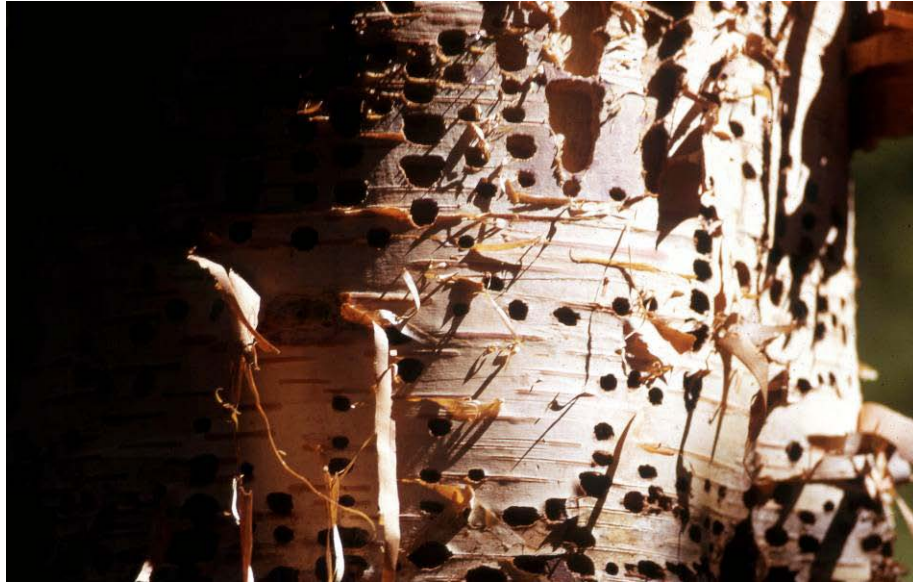


Figure 3. Yellow-bellied Sapsucker feeding wells in the bark of a white birch (top) and an apple (bottom), both in New Brunswick. Photos: M. Burzynski

Feeding behaviour is similar in winter, but tree sap yields less sugar at that time of year, and in northern parts of the winter range, arthropods are less available. Birds in northern areas (Maine, Michigan, Ontario) pry bark scales off large areas of tree trunks for arthropods, eat frozen fruit, and lick sap if they can obtain it. In the north these birds must search long and hard for food during the short days of winter (Tate 1973).



Figure 4. Sapsucker-like holes in the base of a large white spruce, Konrad Lake, north-central Labrador, probably made by Three-toed Woodpecker. The holes are in horizontal rows rather than in columns. They are also deeper, lower on the tree, and larger than those made by a sapsucker. Photo: M. Burzynski

Sphyrapicus varius usually nests in live deciduous trees such as *Betula*, *Populus* and *Acer*, though many other species of deciduous trees and a few coniferous trees are also used. The trees chosen for nesting are often infected with heart rot caused by the fungi *Phellinus* and *Fomes*, or by sapwood decomposers such as *Trichaptum* and *Trametes* (Runde and Capen 1987). All four genera are common in this province (Malloch 2009).

Figure 5 shows a typical nest location. Frequently, returning pairs will re-use the nest tree (sometimes for up to seven years; Kilham 1971), although not always the nest (Ehrlich *et al.* 1988). Nests are usually between 3 and 14 m above the ground, and are constructed by both sexes. Usually, a new hole is dug each year, often several are started and only one inhabited. Abandoned holes are often used by other species.

Only one brood is raised each season. Clutch size is between 5 and 7. Incubation involves both sexes, and lasts about 14 days. Only one brood is raised each season. The chicks are altricial, born naked and nidicolous. Twenty-five to 30 days after hatching, the young, leave the nest. This species breeds in its first year and annually. In a study of 32 nests in a

northern study Michigan, breeding success averaged 2.72 fledglings per nest (Eberhard 1994).



Figure 5. Female sapsucker at nest hole in dead, fungus-infected birch in New Brunswick. Photo: M. Burzynski.

Outside the mating season, *Sphyrapicus varius* is solitary, but loose groups sometimes assemble during migration. Females often migrate farther than males (Oberholzer 1974). Mated pairs stay together as long as both survive.

Maximum age for this species is reported as 6 years 9 months (Clapp *et al.* 1983). No information is available about adult survivorship (Walters *et al.* 2002). Typical predators are hawks, weasels, and Red Squirrel (*Tamiasciurus hudsonicus*; Erskine and McLaren 1972). In a study in northern Michigan, predators found 8 out of 39 nests (Eberhardt 1994).

No information is available about diseases of this species, but work has been done on ectoparasites, showing that they can carry mites, biting lice, and louse flies. Several species of endoparasites (blood-inhabiting) have also been recorded (Walters *et al.* 2002).

Population Size and Area of Occupancy

Paul Linegar (pers. comm.) refers to *Sphyrapicus varius* as “the least-common nesting woodpecker in Newfoundland and Labrador” and states that “Historically, it was known to be an uncommon breeding species on Newfoundland but deforestation due to logging over the past hundred years has eliminated a great deal of its nesting habitat. As a result there have only been a few indications of nesting in recent decades, mostly from western Newfoundland, and to a lesser extent central Newfoundland.”

Tuck (1967) states that the species is “Fairly restricted to deciduous trees in western and central Newfoundland”. Griscom (1926) describes the species as “Fairly common in the heavy timber of more sheltered calcareous valleys.” Peters and Burleigh (1950) said that the species “Prefers heavy timbered valleys and especially the Humber River flowage, but this (habitat) is not abundant.” Mactavish, Ryan, and Wells (1986) wrote that, in the Harpoon Brook area south of Millertown, the species lives in “mixed stands of large mature white birch and trembling aspen” and that “vast areas of beautiful large mature white birch without aspen appear devoid of sapsuckers” (Bruce Mactavish pers. comm.).

In the years between 1988 and 2008, of the sapsucker sightings in the province, 5 were in April, 16 were in May, 6 in June, 2 in July, 2 in October, 2 in November, and 1 in December. The October to December birds may have been confused juveniles (2 of the 5 were identified as juveniles). The number of birds seen per year during that 20 year period (not, of course, reflecting the total population) ranged between 0 and 5, with an average of 1.8 per year.

No population counts of this species have been attempted in Newfoundland and Labrador. The only available estimate was from Paul Linegar (pers. comm.), who wrote: “It’s tough to even guess the breeding population. I imagine it is less than 500 pairs for Newfoundland, and maybe it is less than 200 pairs. In other words, a drop in the bucket compared to the Maritimes. The breeding population in Labrador could be less than a hundred pairs.”

The territory size of this species in the northeast ranges between 0.8 and 3.1 hectares (Walters *et al.* 2002). Using these numbers as a rough proxy, and employing a estimated population size of 700 pairs (see above), a rough AO may be calculated to be 560-2170 hectares (= 5.6 – 21.7 km²).

Aboriginal, Traditional and Local Ecological Knowledge

Kevin Barnes, Vice President of the Federation of Newfoundland Indians, was contacted, but was unable to supply any First Nation information about this species.

Trends

Breeding Bird Survey data for the period 1967 to 2007 show population declines in New Brunswick and Nova Scotia, and increases in Québec and Ontario (Downes and Collins 2008). Because of the small number of sightings each year, insufficient data are available to speculate about population trends for this species in Newfoundland and Labrador. Very little information is available about Labrador.

Countrywide, the CWS publication *Bird Trends* (Kennedy 1998) lists *Sphyrapicus varius* with a trend of 0? (“0 indicates a non-significant trend [with adequate sampling] of -3 to 3 % per year; or a significant trend of -1 to 1 % per year; or [in absence of data] other evidence of a relatively stable population; ? Indicates that 2% of Canadian breeding range is sampled by BBS, or the source was a survey less standardized than BBS. Supplementary data would be valuable”). Canada is considered to have a very high supervisory responsibility for this species because >80% of the breeding range is within this country, and Canadian concern for the species is rated as medium.

Whether critical sapsucker habitat will continue to decline in the province, as it seems to have done in the past, is uncertain.

Threats and Limiting Factors

The main threats to sapsucker habitat in Newfoundland and Labrador are twofold: logging of mature forest and hydroelectric developments that flood large areas of productive forested valleys.

Corner Brook Pulp and Paper’s most recent Five Year Operating Plan (2008) shows that in District 14 there will be extensive cutting around Codroy Pond, Barachois Brook, and Harrys River; and in District 15 the cutting will include large areas of mature forest around Pasadena, Pinchgut Lake, Georges Lake, and a wide swath between Nicholsville and Corner Brook. All of this forest is in the portion of the Island’s west coast with the largest number of Yellow-bellied Sapsucker collections and reports.

Logging is an obvious threat to sapsucker habitat. Yet with the current atmosphere of layoffs and pulp mill closures, this threat may for the short-term be declining on the Island of Newfoundland. The species' preference for hardwood trees for feeding, and for mature to decadent large hardwoods for nesting means that decades must pass after logging or fire before habitat is again suitable for the birds.

In Labrador, the proposed Lower Churchill River hydroelectric generation project may pose a specific threat to habitat by flooding riparian forest. NL Hydro (2006) indicates that the project will consist of two generating facilities, one at Gull Island and the other at Muskrat Falls. The former will back up water for 232 km flooding an area of 85 km², and the latter will inundate 59 km of river valley creating a reservoir of 41 km². Two transmission line routes will also be cut, one carrying 230 kV over 60 km, and the other carrying 735 kV over 203 km. See Figure 6. The affected forest is in the same area that most of the Labrador sightings of *S. varius* have been recorded.

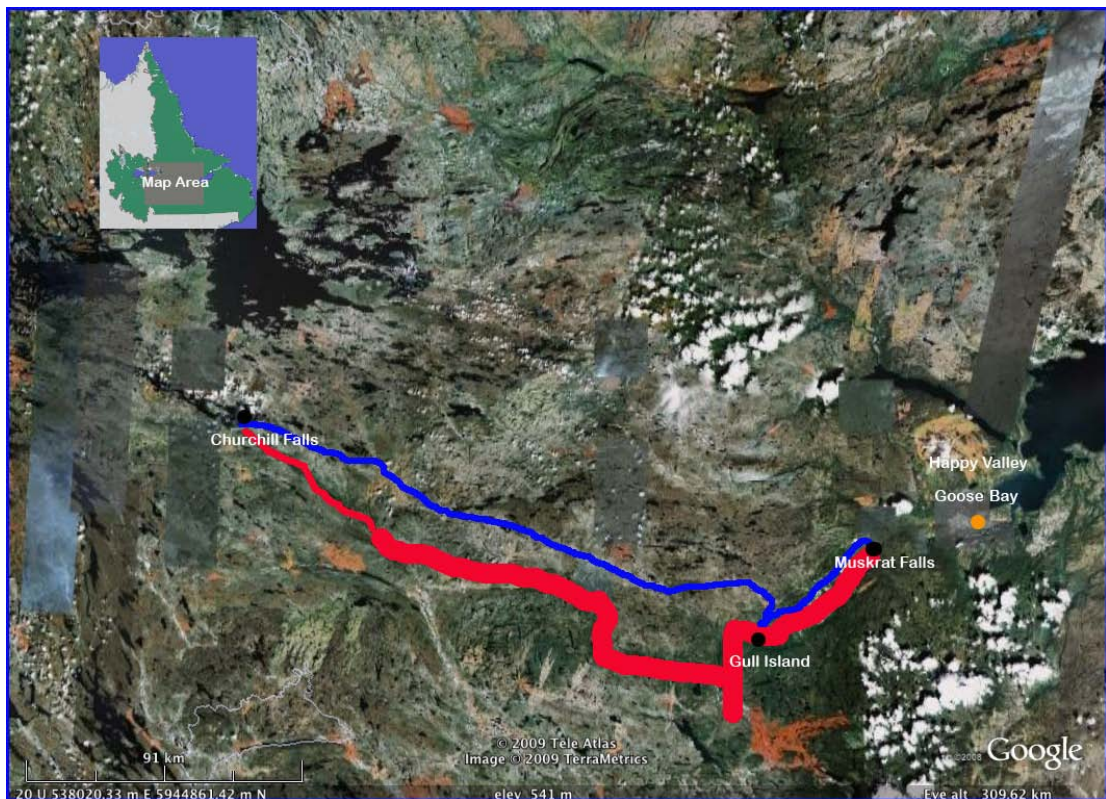


Figure 6. Proposed Lower Churchill Hydroelectric Generation Project. The area to be flooded lies within the red portion of the map, and the powerline route is shown in blue. Adapted from NL Hydro (2006).

Red Squirrels are predators of juvenile birds, and are a relatively recent introduction to the Island of Newfoundland (1963). However, the Yellow-bellied Sapsucker co-exists with this and other species of squirrel throughout the rest of its range—including Labrador. So squirrels could have increased predator pressure on sapsucker nestlings, but there are not sufficient data to determine this.

Moose were introduced to Newfoundland in 1878 and 1904, and since then have spread across the Island, with a population of about 125,000 (McLaren *et al.* 2004). In many parts of the boreal forest of the Island, the large number of these browsing ungulates has severely reduced sapling survival and retarded re-vegetation in cut, insect-killed, and burned stands. Moose browse Balsam Fir and many hardwoods, including Birches and Trembling Aspen, two species associated with the nests seen at Millertown. If the current high moose population persists, it will have a long-term effect on forest composition by removing or suppressing species palatable to moose, including some that may be required by the Yellow-bellied Sapsucker.

The province has been using BTK (a biological insecticide developed from *Bacillus thuringiensis* ssp. *kurstakito*) to control forest insects such as Spruce budworm (*Choristoneura fumiferana*) and Hemlock looper (*Lambdina fiscellaria*). This insecticide is non-specific, affecting soft-bodied forms of many insects, especially Lepidoptera. Large-scale applications within the habitat used by *S. varius* could reduce the availability of insects required by adults to feed juveniles.

The migration route(s) and winter destinations used by sapsuckers from Newfoundland and Labrador are not known, so it is not possible to comment on threats during migration or in wintering habitat. However, lit buildings and towers could attract night-migrating birds and induce collisions (Walters *et al.* 2002; Rich and Longcore 2006). Insecticides and other inorganic toxins could also harm overwintering birds and the insects on which they feed, and destruction of feeding habitat could reduce survivorship. Once the birds arrive on the Island and in Labrador in spring, availability of food early in the season, either in the form of insects or sap, might be limiting. The growing season starts two- to three-weeks later in this province than that in nearby Nova Scotia and New Brunswick (pers. obs.).

Existing Protection

As a migratory insectivorous bird, this species is protected everywhere in Newfoundland and Labrador, including private lands, under the regulations of the Migratory Birds Convention Act. During migration in the USA, they are protected under the Migratory Bird Treaty Act. The habitat of *S. varius* is protected in the province by the following managed areas and legislation:

Managed Area and Legislation	Species is Protected	Habitat is Protected
National Parks <i>Canada National Parks Act</i>	Yes	Yes
National Historic Sites <i>National Historic Parks Wildlife and Domestic Animals Regulations</i>	Yes	Yes
Provincial Parks <i>Provincial Parks Act</i>	Yes	Yes
Main River Waterway Provincial Park and Canadian Heritage River	Yes	Nesting and feeding habitat are protected within the Waterway Provincial Park
Provincial Ecological Reserves <i>Provincial Wilderness and Ecological Reserve Act</i>	Yes	Yes
Provincial Wildlife Reserves <i>Wildlife Act</i>	Yes	Yes, although there can be harvesting within a Wildlife Reserve under permit. Little Grand Lake is the only site with potential habitat.
Provincial Public Reserve <i>Public Lands Act</i>	Yes	The only Provincial Public Reserve is Glovers Island. Mineral exploration is allowed under permit, timber harvesting could be allowed.
Provincial Wilderness Reserves <i>Provincial Wilderness and Ecological Reserve Act</i>	Yes	Yes
Salmonier Nature Park <i>Wildlife Act</i>	Yes	Yes

(Siàn French, pers. comm.)

Of the provincially protected lands, Glovers Island Provincial Public Reserve, Little Grand Lake Provincial Wildlife Reserve, Barachois Pond Provincial Park, and possibly Sir Richard Squires Provincial Park have the highest potential as nest sites for this species.

Special Significance

Sphyrapicus varius is considered by some authors to be a keystone species, which influences the structure of local bird and insect communities, and interacts directly with various species to create conditions that cause a concentration of activity by other species (Kilham 1953, Rissler *et al.* 1985). Their sap wells attract a wide range of insects (Hymenoptera—especially ants, Diptera, Coleoptera, diurnal and nocturnal Lepidoptera, and others.) and birds (especially Ruby-throated Hummingbirds, Ruby-crowned Kinglets, and Yellow-rumped Warblers). Foster and Tate (1966), working in Michigan, found that insects of 22 families used the sap wells, as did 20 species of birds and 5 mammals. These organisms obtain food from the sap wells, sometimes by consuming the other visitors to those wells. Flaspohler and Grossheusch (1996) document Ruby-throated Hummingbirds following sapsuckers as they move through their orchard of tapped trees, and they suggest that the presence of sapsuckers may allow hummingbirds to arrive at marginal breeding grounds earlier than the availability of flowers would allow. The sapsuckers' abandoned nest holes are used by cavity-nesting birds and by invertebrates and mammals.

The clustered sap wells damage trees, attract insect pests, and facilitate the entry of pathogenic fungi and bacteria. Branches and smaller trees or treetops can be girdled and killed by successive years of sap tapping by these birds. In this way, one researcher has suggested that each pair of Yellow-bellied Sapsuckers is probably responsible for one or two tree deaths per year in their sap orchard (Lawrence 1967). The hole clusters created by these birds can heal over, but permanently scar the wood, causing lumber grade defects called “ring shake” and “bird peck defects”. Because these birds occasionally disfigure shade and specimen trees and slow the growth of fruit and plantation trees, they are considered “pests” in some horticultural, agricultural, and silvicultural literature (e.g. Hildahl 2008).

Sapsuckers drum against trees and other objects in spring (usually June) to attract mates and assert territoriality. In natural habitat this is not a problem, but some birds in urban situations have become annoying to human residents by repeatedly hammering on street signs, chimney flashing, and metal garbage cans.

Sources of Information and List of References

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Collection Databases Examined

American Museum of Natural History
Canadian Museum of Nature
Museum of Comparative Zoology, Harvard University
Provincial Museum of Newfoundland and Labrador

Rank or Status

Global	
G-rank	G5
IUCN	LC (Least Concern)
National	
N-rank	N5B
National General Status	Secure (4)
COSEWIC	N/A
Provincial	
Provincial General Status	May be at risk (2)
Newfoundland S-rank	S2B
Newfoundland General Status	May be at risk (2)
Labrador S-rank	S1?B
Labrador General Status	Undetermined (5)
Adjacent Jurisdictions	
Nova Scotia S-Rank	S5B
Nova Scotia General Status	Secure (4)
Prince Edward Island S-Rank	S5B
Prince Edward Island General Status	Secure (4)
New Brunswick S-Rank	S5B
New Brunswick General Status	Secure (4)
Québec S-Rank	S5
Québec General Status	Secure (4)

(From Nature Serve; Wild Species 2005; The General Status of Species in Canada; Wildlife Division, Newfoundland and Labrador)

TECHNICAL SUMMARY

Distribution and Population Information	Criteria Assessment
<i>Extent of occurrence (EO)(km²)</i>	Newfoundland: polygon from Codroy to Deer Lake to Springdale to Clarenville includes an area of approximately 46,000 km ² . Labrador: not enough data.
<i>Area of occupancy (AO) (km²)</i>	Unknown . Calculated as 5.6 – 21.7 km ² on the basis of the total area of territories (see text)
<i>Number of extant locations</i>	Unknown
<i>Specify trend in # locations, EO, AO (decline, stable, increasing, unknown)</i>	Unknown
<i>Habitat trend: specify declining, stable, increasing or unknown trend in area, extent or quality of habitat</i>	Newfoundland: Unknown. Extensive cutting is proposed in the next five years in forest districts 14 and 15, which was historically some of the most important habitat for the species in the province. Moose may also be altering forest composition. Labrador: unknown, too few records, but note comments in text about potential for flooding by Lower Churchill River development.
<i>Generation time (average age of parents in the population)</i>	Oldest known adult was about 6 years 9 months (Clapp <i>et al.</i> 1983), average age not known.
<i>Number of mature individuals (capable of reproduction) in the Provincial population</i>	Unknown. Perhaps 400 to 1,000 in Newfoundland, probably less than 200 in Labrador (Paul Linegar pers. comm.)
<i>Total population trend: specify declining, stable, increasing or unknown trend in number of mature individuals or number of populations</i>	Unknown. Breeding Bird Survey data indicate a population decrease in New Brunswick and Nova Scotia, but steady since about 1978 and an increase in Ontario and Québec.
<i>Are there extreme fluctuations (>1 order of magnitude) in number of mature individuals, number of locations, AO and/or EO?</i>	Unknown
<i>Is the total population severely fragmented (most individuals found within small and isolated populations)</i>	The Newfoundland and Labrador populations may be separated. There are too few records to know whether the Labrador population is continuous with the Québec population. Newfoundland population appears to be concentrated around several centres, but that may be an observational artefact.

Rescue Effect	
<i>Does species exist elsewhere?</i>	Yes
<i>Status of the outside population(s)?</i>	Secure
<i>Is immigration known or possible?</i>	Yes
<i>Would immigrants be adapted to survive here?</i>	Yes
<i>Is there sufficient habitat for immigrants here?</i>	Possibly not, heavily timbered valleys and large stands of mature birch, maple, and poplar are no longer common.

Appendix A. Population Information

Verified Occurrences/Range Use

Historic Collections (pre 1983)

Date	Description	Location	Reported by	Source of Record
1889, July 2 MCZ 187359	1 juv	Bay of Islands	J.C. Cahoon	Harvard U. Mus. Comp. Zool.
1890, August 1 MCZ 187360	1 female	Exploits Bay?	J.C. Cahoon	Harvard U. Mus. Comp. Zool.
1894, July MCZ 187380	1 male	Deer Pond (=Deer Lake)	A.E. Colburn	Harvard U. Mus. Comp. Zool.
1894, July MCZ 187379	1 female	Deer Pond (=Deer Lake)	A.E. Colburn	Harvard U. Mus. Comp. Zool.
1894, July MCZ 187378	1 juv male	Deer Pond (=Deer Lake)	A.E. Colburn	Harvard U. Mus. Comp. Zool.
1889, July MCZ 187358	1 female	Bay of Islands	J.C. Cahoon	Harvard U. Mus. Comp. Zool.
1894, July 2 MCZ 187381	1 male	Deer Pond (=Deer Lake)	A.E. Colburn	Harvard U. Mus. Comp. Zool.
1894, July 2 MCZ 187382	1 male	Deer Pond (=Deer Lake)	A.E. Colburn	Harvard U. Mus. Comp. Zool.
1894, July 2 MCZ 187383	1 male, juv	Deer Pond (=Deer Lake)	A.E. Colburn	Harvard U. Mus. Comp. Zool.
1894, June MCZ 187372	1 male	Deer Pond (=Deer Lake)	A.E. Colburn	Harvard U. Mus. Comp. Zool.
1894, June MCZ 187371	1 male	Deer Pond (=Deer Lake)	A.E. Colburn	Harvard U. Mus. Comp. Zool.
1894, June 1 MCZ 246291	1 male	Codroy	E. Doane	Harvard U. Mus. Comp. Zool.
1894, June 1 MCZ 246292	1 female	Codroy	E. Doane	Harvard U. Mus. Comp. Zool.
1894, June 1 MCZ 187379	1 female	Codroy	E. Doane	Harvard U. Mus. Comp. Zool.
1894, June 1 MCZ 187373	1 female	Deer Pond (=Deer Lake)	A.E. Colburn	Harvard U. Mus. Comp. Zool.
1894, June 2 MCZ 187377	1 male	Deer Pond (=Deer Lake)	A.E. Colburn	Harvard U. Mus. Comp. Zool.
1894, June 2 MCZ 187376	1 female	Deer Pond (=Deer Lake)	A.E. Colburn	Harvard U. Mus. Comp. Zool.
1894, June 2 MCZ 187375	1 female	Deer Pond (=Deer Lake)	A.E. Colburn	Harvard U. Mus. Comp. Zool.

1894, June 2 MCZ 187374	1 male	Deer Pond (=Deer Lake)	A.E. Colburn	Harvard U. Mus. Comp. Zool.
1894, May 1 MCZ 187361	1 male	Deer Pond (=Deer Lake)	A.E. Colburn	Harvard U. Mus. Comp. Zool.
1894, may 2 MCZ 187365	1 male	Deer Pond (=Deer Lake)	A.E. Colburn	Harvard U. Mus. Comp. Zool.
1894, May 2 MCZ 187366	1 male	Deer Pond (=Deer Lake)	A.E. Colburn	Harvard U. Mus. Comp. Zool.
1894, May 2 MCZ 187367	1 male	Deer Pond (=Deer Lake)	A.E. Colburn	Harvard U. Mus. Comp. Zool.
1894, May 2 MCZ 187368	1 male	Deer Pond (=Deer Lake)	A.E. Colburn	Harvard U. Mus. Comp. Zool.
1894, May 2 MCZ 187364	1 female	Deer Pond (=Deer Lake)	A.E. Colburn	Harvard U. Mus. Comp. Zool.
1894, May 2 MCZ 187363	1 male	Deer Pond (=Deer Lake)	A.E. Colburn	Harvard U. Mus. Comp. Zool.
1894, May 20 MCZ 187362	1 male	Deer Pond (=Deer Lake)	A.E. Colburn	Harvard U. Mus. Comp. Zool.
1894, May 3 MCZ 187369	1 male	Deer Pond (=Deer Lake)	A.E. Colburn	Harvard U. Mus. Comp. Zool.
1894, May 3 MCZ 187370	1 female	Deer Pond (=Deer Lake)	A.E. Colburn	Harvard U. Mus. Comp. Zool.
1899, May 5 MCZ 104492	1 female	Labrador, L'Anse au Loup	E. Doane	Harvard U. Mus. Comp. Zool.
1912 June 23 MCZ 253267	1 female	Sandy River	A.C. Bent	Harvard U. Mus. Comp. Zool.
1912 June 23 MCZ 253267	1 female	Sandy River	A.C. Bent	Harvard U. Mus. Comp. Zool.
1912, June 09 SKIN 755111	1 male adult	Fox Island River	Dr L.C. Stanford	Am. Mus. Nat. Hist.
1913, Jun 26	Male collected	Bonne Bay	Dr. L.C. Stanford	J. Maunder, from literature
1913, June 04 SKIN 755110	1 male	Harry's River	Dr L.C. Stanford	Am. Mus. Nat. Hist.
1913, June 30 SKIN 755118	1 male adult	Harry's River	Dr L.C. Stanford	Am. Mus. Nat. Hist.
1913, July 27 SKIN 755108	1 male adult	Harry's River	Dr L.C. Stanford	Am. Mus. Nat. Hist.
1914, July 08 SKIN 755107	1 male adult	Harry's River	Dr L.C. Stanford	Am. Mus. Nat. Hist.
1914, June 24 SKIN 755106	1 male adult	Harry's River	Dr L.C. Stanford	Am. Mus. Nat. Hist.
1915 July MCZ 325778	1 male	Nicholsville	G.K. Noble	Harvard U. Mus. Comp. Zool.

1915 July 1 MCZ 325777	1 male	Nicholsville	G.K. Noble	Harvard U. Mus. Comp. Zool.
1915, Jul 5-10	2 Males, 2 Females MCZ 325778-81, two broods of recently hatched young, parent birds observed carrying food to young, (see entries below).	Nicholsville	G.K. Noble	W. Montevecchi
1915, July MCZ 325782	1 female	Deer Pond (=Deer Lake)	G.K. Noble	Harvard U. Mus. Comp. Zool.
1915, July MCZ 325781	1 male	Nicholsville	G.K. Noble	Harvard U. Mus. Comp. Zool.
1915, July MCZ 325780	1 female	Nicholsville	G.K. Noble	Harvard U. Mus. Comp. Zool.
1915, July MCZ 325779	1 female	Nicholsville	G.K. Noble	Harvard U. Mus. Comp. Zool.
1915, July MCZ 325776	1 male	Nicholsville	G.K. Noble	Harvard U. Mus. Comp. Zool.
1917, July 07 SKIN 755109; Nfld.	1 female "Fairly common in the heavy timber of more sheltered calcareous valleys" quoted by L. Griscom	Harry's River	Dr L.C. Stanford	Am. Mus. Nat. Hist.
1934, Aug 12 Coll. Brit. Mus.	Ants in stomach, freshly ringed birch on Sep 7	Beaver Mt, Great Rattling Brook, central Nfld	K.B. Rooke	W. Montevecchi + J. Maunder from literature
1949, Jul 7 NMC 35045	1 male	South Brook	A.W. Cameron	Can. Mus. Nat.
1949, Jun 29 NMC 35034	1 male	South Brook, Green Bay	L. Duncanson	Can. Mus. Nat.
1949, July 7 NMC 35044	1 female	South Brook, Green Bay	L. Duncanson	Can. Mus. Nat.
1950	Specimens taken. Local in central and west- central Nfld. Prefers heavy timbered valleys and especially the Humber River flowage, but is not abundant.	Codroy, Tompkins, Bay of Islands, Deer Lake, Nicholsville, Sandy River, Exploits Bay, Badger. Loomis recorded it at St. Anthony. "We recorded it only at Deer Lake, Badger, and Tompkins"	Peters and Burleigh	J. Maunder, from literature

Historic Sightings (pre 1983)

1912, between Sept 13 & Oct 4	1	Humber River	Dr Shattuck, in R.H. Howe	J. Maunder, from literature
1915, July 5 & 6.	Recently hatched brood seen	Nicholsville	Reported by Noble 1919	NL Nest Record Cards
1919, Jul 5,6	Brood of recently hatched young	Nicholsville	G.K. Noble	W. Montevecchi
1934, Aug 14	1	S Grand Falls	K.B. Rooke	W. Montevecchi
1936, Aug 2	1	St. Anthony	Dr E. Burge in Loomis 1945	W. Montevecchi
1938, Aug 13	1 male seen	Adies Pond	Public Schools Exploring Soc.	J. Maunder, from literature
1939	2 nesting pairs seen, one nest in living poplar, 10 m up, young heard calling; second nest in living birch.	Labrador, Gull Island and Gull island Rapids	W.E.C. Todd	W.E.C. Todd 1963
1950, Aug 2,4	1 juvenile	Labrador, Goose Bay near Hamilton River	GW North	W. Montevecchi
1951, May 26	1	Adies Pond, Upper Humber River	L.M. Tuck	W. Montevecchi
1954, Jun 20	Nesting	Swift Current	L.M. Tuck	W. Montevecchi
1961, May 30	1	Shoulder Blade Lake	H. Deichmann	W. Montevecchi
1961, Jun 4	1 male	Harpoon Bk drainage	H. Deichmann	W. Montevecchi
1961, Jun 28	1 male	Barco Falls	H. Deichmann	W. Montevecchi
1969, Jun 2 to Jul 2	1 male, 1 female, Nestlings Jun 2: f enter hole nr top dead very lg birch, Jun 7 m enter same hole & remove wood shav Jul 1 both m & f close to orig tree gather food & appear to make trips to another spot short dist away	Chignic Lodge Codroy Valley 47.013°N 59.19°W	Graeme. Greenlee	W. Montevecchi also NL Nest Record Card

	Jul 2 nest located in tree 30'fr/orig tree, m & f carry food into hole & y heard chirp; Blk-cap Chickadee nest in same tree, hole 2' below sapsuck hole & on other side of tree; nest sm hole nr top of dead birch stump 10'/grd, bals fir birch maple forest			
1969 or 1970, Jun	1	NW quadrant of Gull Island, Witless Bay	J. Maunder	Haycock 1973
1970, Nov 11	1-2	St. John's, Bowring Park	D. Barton?	W. Montevecchi
1970, Nov11	1	St. John's, Bowring Pk	Howard Clase	Nf.birds
1970, early Nov	1	Clarenville	R. Cooper	W. Montevecchi
1970, early Nov	1	Manuels	C.G.	W. Montevecchi
1971, Jan 13	1	Portugal Cove	C. Story	W. Montevecchi
1971, Dec 26	1	St John's	Christmas Bird Count	W. Montevecchi
1973, Jun 6-7	1 male and 1 female, Pair of adults seen at nest cavity, male entered. Cavity 8 m high in tree. Nesting activity 1.5h watch m & f take turns perch outside cavity & preen during evening but not going in, next day m inside cavit w/f nearby, nest cavity obvious excavated by woodpeckers 8m up dead upper part white birch in tall stand of mix timber	Pasadena 49.013°N 57.598°W	John Wells and C.S.	NL Nest Record Card
1973, Jun 5	1	Pasadena	B. Mactavish, J. Wells	W. Montevecchi
1975, Feb 26	At feeder	St Johns		W. Montevecchi

1977, Sep 18	1 juvenile	Black Duck	R. Burrows	W. Montevecchi
1979, May 9	1	Terra Nova Nat. Park	G. Marsh	W. Montevecchi
1981, May 19	1 male	Gander	I. Kirkham	W. Montevecchi
1981, May 19	1 male	Gander	P. Linegar	W. Montevecchi
1981, May 30	1	woods nr Salmonier Ln N Arm R		W. Montevecchi
1981, Jun	Signs	Gamma Lk Long Rg Mt	I. Goudie, WAM	W. Montevecchi
1982, May early	1	Terra Nova Nat Park	C. Junck	W. Montevecchi
1982, May 25	1	Inner Newman Sound	R. Burrows	W. Montevecchi
1982, Nov 10-12	1	Tors Cove	P. Hicks	W. Montevecchi

Recent Sightings (1983 to present)

Date	Description	Location	Reported by	Source of Record
1983, Apr 27	1	Ramea	R. Northcott	W. Montevecchi
1986, May 24	2 nd record	Gros Morne Nat Park	B. Maybank	W. Montevecchi
1986, Jul	15 total, 11 Juveniles 5 different nestings Mixed stands large mature white birch & trembling aspen, vast areas beautiful large mature white birch without aspen appear devoid of sapsuckers	Harpoon Brk area S of Millertown	B. Mactavish, P. Ryan, J. Wells	W. Montevecchi
1987, Jun 17	1	Little Grand Lake near Lewaseechjeech Brk	K. Moore, M. Pitcher	W. Montevecchi
1990, May 27, Jun 1	Drumming pair must be part of norm avifauna in birch for cent Nf w/aspen stands	Near Harpoon Brook, Millertown area	B. Mactavish	W. Montevecchi
1991, Jun	1	Pasadena	B. Mactavish	Nf.birds

1991, Jun 15	1 male persistent drumming open yel birch forest; presume nest hole in dead live yellow birch	Pasadena	B. Mactavish	W. Montevecchi
1991, Jul 2	Males drumming	Pasadena	B. Mactavish	W. Montevecchi
1992, May 10	1 male	Ramea	R. Northcott	W. Montevecchi
1993, Nov 10	1	St John's	J. Wells	W. Montevecchi
1995, May 31	1	Pasadena	D. Whitaker	W. Montevecchi
1996, May 24-25	1 male and 1 female mating suburban yd	Pasadena	L. Mayo	W. Montevecchi
1996, mid Oct	1	Port Kirwan	<i>fide</i> J. Pratt	W. Montevecchi
1997, mid Jun	1	St John's	D. Barton <i>fide</i> D. Steele	W. Montevecchi
1997, summer	1	St. John's, Bowring Pk	L. Cuff	Nf.birds
1998, Apr 19	1	Ramea	R. Northcott	W. Montevecchi
1998, Apr. 20	1	St John's	D. Fifield	Nf.birds
1998, Apr. 20	1	St John's Middle Cv Rd	T. Boland	Nf.birds
1998, Apr 20	1 at feeder	Middle Cove Rd	T. Boland	W. Montevecchi
1998, Apr 21	1	St John's	<i>fide</i> D. Fifield	W. Montevecchi
1999, summer	1	Bottom Brk Arboretum, just bef Burgeo Rd turnoff	M.Howell, M.Vasallo, L. Bateman	L. Bateman
2000 ?	1	Torbay Rd	K. Knowles	Nf.birds
2001, May 2	1 female	Port Harmon, Stephenville	B. Winsor	Nf.birds
2001, May 2	1 female	Kippens	B. Windsor	W. Montevecchi
2001, May 2	3 arr	Ramea	R. Northcott	W. Montevecchi
2001, May 6	1	Kippens	B. Winsor	Nf.birds

2001, Nov 26	1	Country Pd, Avalon	P. Armitage	Nf.birds
2002, May 16	1	Torbay Rd	K. Knowles	Nf.birds
2003, May 20	1	Torbay Rd	A. Hughes	Nf.birds
2003, mid Dec	1	St John's	N. Christian	W. Montevecchi
2005, May 16	1 bird in hawthorn tree	Pynn's Brook, Iams' property	Marie Iams	Lois Bateman
2006, May 16	1 male	Corner Brook,	M. Iams	Nf.birds
2006, late May	1 at feeder	Pynns Brook, lower Humber River	M. Iams	W. Montevecchi
2007, Oct. 2	1 juvenile	Plum Point	J. & I. Gibbons	Nf.birds
2007, May 2	1	Branch	Ken Knowles	Nf.birds
2007, spring	1	Pasadena	G. Leonard	Nf.birds
2007, early May	1	Branch	M. Roche	W. Montevecchi
2008, Apr. 19	1	St Mary's	K. Knowles	Nf.birds

Other Observations (Saint-Pierre et Miquelon)

Date	Description	Location	Reported by	Source of Record
1966, Oct 3	1 juvenile	Saint-Pierre	M.J. Borotra	J. Maunder, from literature
1967, Oct 4	1 juvenile captured and released	Saint-Pierre	M.J. Borotra	J. Maunder, from literature
1971, Sept 19	Fresh bark pits	Saint-Pierre & Miquelon, Langlade	L.M. Tuck + M.J. Borotra	J. Maunder, from literature
1982, May 1	1	Saint-Pierre	D.A.R., J..LB., V.C.	W. Montevecchi
1988, Oct 28	1 juvenile	Saint-Pierre	R. Etcheberry	W. Montevecchi
1990, May 1	1	Saint-Pierre	<i>fide</i> R. Etcheberry	W. Montevecchi

Recent Search Effort

No information is available about directed searches for this species. However, as mentioned above, this province has been searched by ornithologists and birders for almost two centuries, (for a comprehensive account see Montevicchi and Tuck, 1987), and interest in birds remains high. Birding groups across the island, Christmas bird counts, breeding bird surveys, the nf.birds Internet discussion group, birders' hotline, and other sources of up-to-date information show the degree of interest that birds continue to inspire within the province. The dearth of records for *Sphyrapicus varius* in Newfoundland and Labrador is not due to a lack of effort. However, the clusters of sightings around human population centres do indicate that people see birds where people are, and this can skew distribution maps based on a small number of observations. Large tracts of this province are difficult to visit, and it will take a concerted effort to get a clear understanding of the numbers and distribution of this species throughout the province.

Additional Historical Sapsucker Records from Newfoundland
John Maunder, January 2009

From Literature

Howe, R. H., Jr. 1913. A few notes on Newfoundland Birds. Auk 30: 114-115.

p. 115. "One seen by Dr. Shattuck ["on the Humber River between September 13 and October 4, 1912."]."

Noble, G. K. 1919. Notes on the Avifana of Newfoundland. Bulletin of the Museum of Comparative Zoölogy at Harvard College 62(14): 541-568.

Sapsuckers were observed on many different occasions. Two broods of recently hatched young were found on July 5th and 6th respectively. Two breeding birds taken July 5th held a number of large red ants in their bills. Other parent birds observed returning to their young also had their bills stuffed with insects, probably ants."

Griscom, L. 1926. Notes on the Summer Birds of the West Coast of Newfoundland. Ibis (Series 12) 3: 656-684.

p. 674. "The Sapsucker is fairly common in the heavy timber of the more sheltered calcareous valleys. Dr. Sanford has specimens from Fox Island River and Harry's River."

Rooke, K. B. 1935. Observations on the Birds of Newfoundland during the 1934 Expedition of the Public Schools Exploring Society. Ibis 5: 856-879.

p. 869. "We obtained a specimen on Beaver Mountain [Great Rattling Brook, central Newfoundland] on 12 August; in its stomach among other things were several ants. This was the only one I saw, but there was plenty of evidence of their presence in the shape of ringed birches. I found one tree freshly ringed on 7 September, so that they had not left the district by then."

Peters and Burleigh. 1950.

p. 286. "Uncommon summer resident, being local in central and west-central Newfoundland. Specimens have been taken by various persons at Codroy, Tompkins, Bay of Islands, Deer Lake, Nicholville, Sandy River, Exploits Bay and Badger. Loomis recorded it once at St. Anthony. It prefers the heavy timbered valleys and especially the Humber River flowage, but is not abundant in area. We recorded it only at Deer Lake, Badger and Tompkins."

Godfrey, W. E. 1960. Notes on Newfoundland Birds. Contributions to Zoology, 1959. National Museums of Canada Bulletin 172: 98-111.

p. 99. "The type of *Picus atrothorax* Lesson came from Newfoundland."]

Tuck, L. M. 1967. The Birds of Newfoundland. Pp. 265-283 IN Smallwood, J. R. (Ed.) The Book of Newfoundland. Volume 3. Newfoundland Book Publishers (1967) Ltd., St. John's, Newfoundland.

p. 279. "Fairly restricted to deciduous trees in western and central Newfoundland".

Has occasionally nested further east such as at Swift Current. Arrives mid-May and departs early September.”

Web Sources

Tuck, L. M., and Michel J. Borotra. 1972. Additions to the Avifauna of St. Pierre and Miquelon. Canadian Field Naturalist 86(3): 279-284.

p. 283. “Apparently only occurs in the archipelago during fall migration. MJB observed an immature at St. Pierre on October 3, 1966 and another immature was captured and later released in the same locality on October 4, 1967. We saw fresh sapsucker borings at Langlade on September 19, 1971.”

Desbrosse, A., R. Etcheberry, and G. Barthe. 1990. Répertoire des oiseaux de l'Archipel. Les cahiers de l'écho. 1: 1-8.

[The included checklist records the species status as “XpAU” = X=Rare, p=(printemps) = spring (lesser), AU (automne) = Fall (more).]