



This beautiful warbler has a high-pitched, inconspicuous song, making it a difficult species to study. A spruce budworm specialist, its population booms during budworm outbreaks.

Bay-breasted Warbler

(Setophaga castanea)

STATUS

SARA **NO STATUS**
 Alberta **SENSITIVE**

British Columbia **RED**
 Saskatchewan **NO STATUS**

PRIMARY HABITAT

Old Spruce/Mixedwood

TERRITORY SIZE

>1 ha

NEST TYPE

Canopy (spruce, fir)

NEST REUSE

Unknown

STAND LEVEL

Patches >5 ha of spruce >80 years old with shrubby understory

LANDSCAPE LEVEL

Reserves >100 ha of spruce >140 years old

BREEDING WINDOW



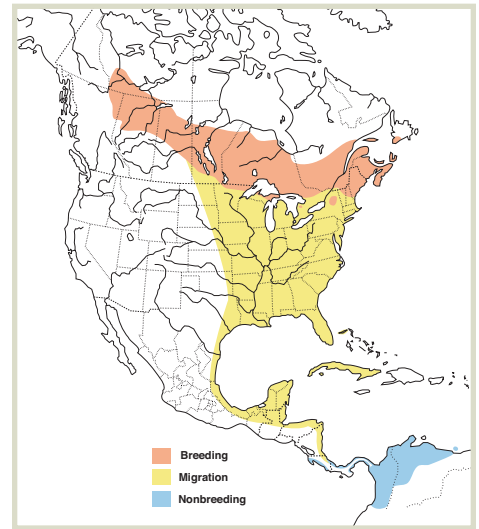
HABITAT ECOLOGY

- Bay-breasted Warblers breed in old white spruce, balsam fir and mixedwood stands.^{1,2} In Saskatchewan, they are most abundant in very old (>140 years) forest.³
- They are often found near water⁴ and will use riparian corridors.⁵
- This species is a spruce budworm specialist: populations will increase greatly during outbreaks, and they may spill over into younger-than-usual habitats due to the abundance of food.⁴
- Bay-breasted Warblers nest mainly in the canopy of spruce or fir trees. Nest height varies widely (1–20 m recorded), but average nest height values range from 4.5–7.5 m.⁴

RESPONSE TO FOREST MANAGEMENT

- Bay-breasted Warblers depend almost exclusively on old, unharvested forests during the breeding season.⁶
- They were unlikely to be present in clearcut (i.e. no planned retention) stands up to 33 years postharvest.⁷
- They are sensitive to removal or fragmentation of old forests. They were absent from 100-ha landscapes with <55% forest cover in Quebec,⁸ and even wide riparian buffers are not considered quality breeding habitat.⁴
- However, mid-seral (30–50-year) harvest-origin (i.e., planted) conifer stands may be suitable habitat.⁹

RANGE MAP



STAND-LEVEL RECOMMENDATIONS

- Retention areas (e.g., Wildlife Tree Areas and Wildlife Habitat Areas in BC) are recommended in areas of high habitat quality where larger-scale deferrals are not feasible. While they are expected to provide important habitat features as the forest regenerates, they are not expected to match the habitat quality of larger unharvested areas, and their value to breeding pairs needs further research.⁵
 - Retention areas (e.g., Wildlife Tree Areas in BC) >5 ha, containing >80 year-old white spruce with dead lower branches and shrubby understory, are recommended within managed areas.⁵
 - Larger unharvested areas of at least 10–30 ha are recommended within areas of very high habitat quality (e.g., white spruce >100–140 years with signs of declining health).⁵
- While direct observations are low due to low population densities, this species is considered unlikely to benefit from dispersed retention levels <40%, based on responses of other forest specialist species.⁶