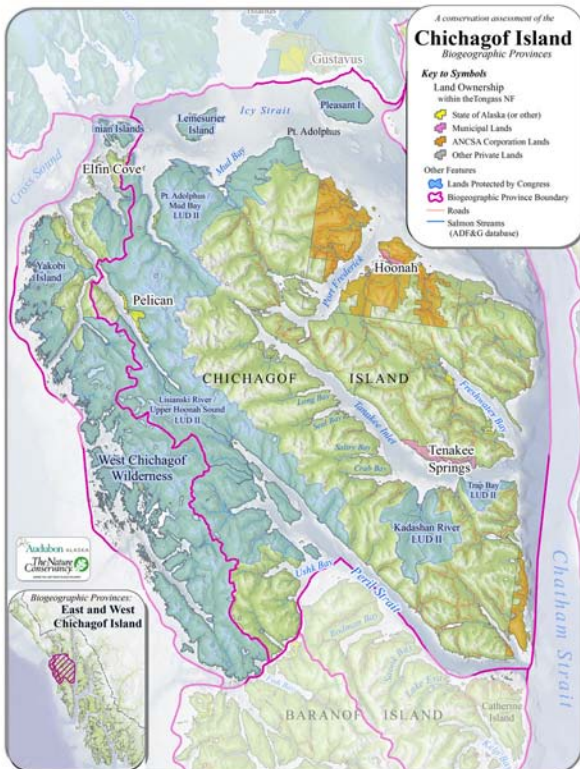


## West Chichagof Province



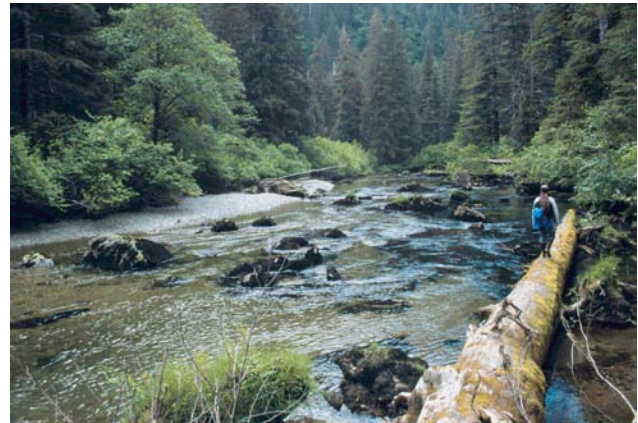
**FIG 1.** West Chichagof Province.

With a dramatic and complex shoreline, West Chichagof is scenic but terrestrial ecosystems are relatively unproductive in this biogeographic province (Fig 1). It is the third smallest island province and large-tree forest is almost non-existent—restricted to small patches in certain valley bottoms—and even productive old growth is scarce. Rolling lowlands along the coast are dominated by bogs and fens, with a combination of bedrock, volcanic soils, and exposure to the open ocean that combine to lower the productivity of West Chichagof compared to easterly portions of the island. Most (87%) of the province falls

within the West Chichagof Wilderness or LUD II areas.

Tertiary granodiorites on Yakobi Island and northwestern Chichagof grade to Cretaceous Sitka greywacke and mixed volcanics and metamorphics at the southeastern end. The Peril Strait/Lisianski Fault that nearly divides Chichagof lines up with the more active Fairweather Fault to the north. Volcanic ash from an ancient eruption of Mt. Edgecumbe to the south blankets much of the till-covered lowland underlying many of the distinctive coastal peatlands.

Small, ocean-facing watersheds drained by relatively minor streams characterize the province. Black River (Fig 2) and the lake-fed stream at the head of Ford Arm are some highly productive exceptions.



**FIG 2.** Black River is one of the most productive salmon streams in West Chichagof Province. (Richard Carstensen)

On the rolling lowlands of the coast, density of small ponds is among the highest in Southeast. High pond density may once have supported vigorous populations of western toad (*Bufo boreas*), but it is unknown whether the species has declined here as elsewhere in recent decades (Carstensen et al. 2003).

West Chichagof Province has a very wet, hypermaritime climate, exposed to frequent Pacific storms. Even during high pressure systems, when blue skies prevail over most of Southeast, this province is often shrouded in fog.

Poor soils and exposure to Pacific storms result in stunted forests along the coastline. A lovely wide-arching growth form develops in the short seaside conifers. This is probably due to the combination of severe wind-training and infrequency of heavy snow-loading.

Large trees are extremely restricted (<1%) within the province, found only on a few of the alluvial valley bottoms.

This small province has short, relatively unproductive fish streams. Only one watershed ranks in the top 55 Southeast VCUs for pink salmon escapement: the Klag Bay VCU with an annual average of 55,600 fish (Flanders et al. 1998). Other important salmon watersheds are Black River (Fig 2) and the sockeye fishery in Ford Arm. Because the peatland-dominated landscape and generally small streams of West Chichagof otherwise offer little forage, these three primary salmon watersheds are extremely important to brown bears.

Chichagof Island has only 13 mammal species, but two of these are endemic subspecies shared only with Baranof Island: a tundra vole (*Microtus oeconomus sitkensis*) and an ermine (*Mustela erminea initis*). These mammals probably colonized Chichagof and Baranof from the north via the “stepping stones” of the Inian Island cluster. It is also noteworthy that one amphibian uncommon elsewhere on the archipelago has been found on Chichagof. Although human introductions have not been ruled out, the presence of northwestern salamander (*Ambystoma gracile*) on Chichagof suggests a possible connection to outer coast glacial refugia.

Absence of wolves combined with rarity of deep snow along the coast allows deer to increase periodically to high populations. This has resulted in near-elimination of favored browse species like blueberry (*Vaccinium spp.*). Brown bears occur in moderate numbers throughout the province. White Sisters Islands support a major sea lion rookery.

This Wilderness was established by the Alaska National Interest Lands Conservation Act in 1980. The highly dissected shoreline and outer islands of the west coast of Chichagof Island provides reasonably

protected waters and a favorite passage for recreational kayakers.

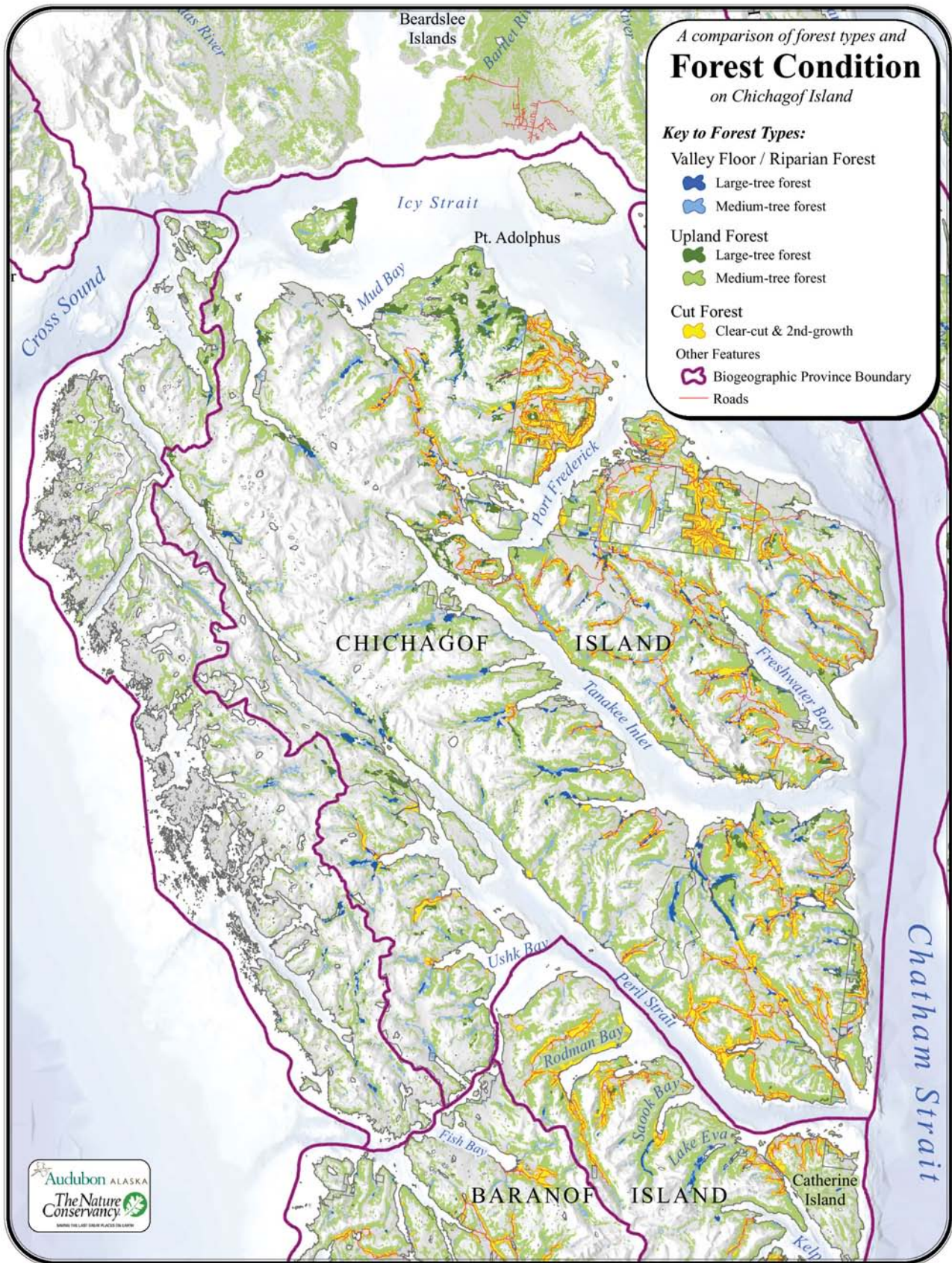
The ecological integrity of the West Chichagof Province remains high and secure. There has been virtually no industrial-scale timber harvest in the West Chichagof Province and permanent roads are absent. A few old mines and mine claims exist in this province but there is no active mining occurring at this time. Less than 3% of this province is available for development and 97% of the province is protected in watershed-scale reserves. The habitat capability for deer and marbled murrelets is 100% of its original capability while brown bear habitat is 97% of its original capability. Ninety-seven percent of freshwater salmon habitat is protected in watershed-scale reserves and 100% of large-tree old growth remains intact with 99% in watershed-scale reserves.

Forest types, historical logging, and roads are mapped within the West Chichagof Province in Figure 4. Refer to the Arc Reader GIS database in Appendix C of this report to review detailed mapped information on location of large-tree stands, past timber harvest, roads, forest reserves, protected areas, and regions of core ecological values.



**FIG 3.** Monkey flower (*Mimulus guttatus*) growing beside White Sulfur hot spring on the outer coast south of Lisianski Strait. While not restricted to thermal activity, this species is a good indicator. All of Southeast's hot springs emerge from granitic rocks. (Richard Carstensen photo)





**FIG 4.** A comparison of forest types and forest condition in the West Chichagof Province of southeastern Alaska.