ESSF Cone Survey Report 2013

Complied by Alan Vyse

February 2014

A co-operative cone survey was started in the summer of 2001 to record variation in high elevation spruce and subalpine fir cone crops across the Southern Interior. In 2013 six surveyors took part and a total of 23 sites were surveyed at 16 locations. This is the 13th year of surveys and many of the sites have been surveyed every year.

Cone crop ratings were high for spruce across the region with the exception of the eastern slopes of the Rockies, south of Calgary, which had a poor crop. Fir crops were more variable. Cone crops in the Cariboo Mountains recovered from the recent defoliation effects of the two year cycle spruce budworm. This is the 4th mast, or bumper, crop of spruce since the surveys started, which is more frequent than expected from earlier surveys and reports.

In an effort to detect the extent of last fall's spruce mast crop, silviculturists on the SISCO mailing list were contacted and asked for their observations. Over 60 observations of amazing crops were reported from the US border northwards through all parts of the southern interior, the Cariboo, Prince George, and along Highway 16 to Hazleton. North of that line there were reports of bumper crops along the Stewart-Cassiar Highway into the Yukon, Mackenzie, the Peace District and Fort Nelson. Similar conditions were reported from Banff and Jasper national parks and into northern Alberta. Southern Alberta was the only location reporting poor crops. Some respondents noted that the crop was the best they had seen in 30 years. There were even reports of an amazing crop in Newfoundland! Ironically, seed orchards in Vernon and clone banks in Prince George had poor crops.

There were also reports of the first good crops of Douglas-fir for many years in the southern Interior, including the northern-most stands. Good crops of other conifer species were also reported including western hemlock, mountain hemlock, western red cedar, and amabilis fir.

The specific factors leading to mast crops in spruce and other conifers are still not known, mostly because cone initiation and development takes place over a lengthy period and can be positively or negatively influenced by a variety of weather conditions over that time.

Many thanks to all the survey co-operators and respondents!

More details are available upon request.

Alan Vyse (vyse@telus.net)