

Citizen's Petition for Assessment of Imminent Threat to the Survival of the Marbled Murrelet, Georgia Depression Population

Submitted to COSEWIC Secretariat
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Submitted by Sunshine Coast Conservation Association
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Purpose of brief:

The Georgia Depression population¹ of the Marbled Murrelet (*brachyramphus marmoratus*) has been identified to be the most at risk population in BC (Kaiser et al.1994). Marbled Murrelet nesting habitat in the Georgia Depression ecoprovince has also been recognized as being severely depleted in provincial government policy (IWMS 1999). Since then, habitat loss has continued, and we believe immediate action is necessary to halt this trend. The purpose of this document is to provide evidence of the imminent threat to the survival of this geographically distinct population of the Marbled Murrelet and to request that COSEWIC undertake an assessment to enable an emergency listing as “endangered” under section 28 of the Species At Risk Act.

COSEWIC jurisdiction to carry out threat assessment under Species At Risk Act

Section 28 of the Species at Risk Act allows any person to apply to COSEWIC where they consider that “there is an imminent threat to the survival of a wildlife species.” COSEWIC is to carry out an assessment of the threat, and report back to the applicant, the Minister, and the Canadian Endangered Species Conservation Council.

“Wildlife species” is defined in the Act as “a species, subspecies, variety or geographically or genetically distinct population of animal...that is wild by nature...”

While Marbled Murrelets are currently listed as a “threatened” species under Schedule 1 of the Species At Risk Act, we believe that there is strong evidence to support the view that the Georgia Depression population of Marbled Murrelets is both geographically distinct, and faces imminent threats to its survival primarily through loss of habitat. COSEWIC’s assessment of these factors will go to the Minister of Environment for consideration and possible recommendation to Cabinet for emergency listing.

Transition provisions under the Species At Risk Act regarding threatened species allow up to four years to prepare a recovery strategy, i.e. by June 5, 2007. If losses to Georgia Depression Marbled Murrelet habitat continue at the same rate as in recent years, the population will be lost if left to this scheduling. Properly recognizing the Georgia

¹ This population covers the East Vancouver Island and Southern Mainland Coast regions.

Depression population as endangered under an emergency listing would speed up preparation and implementation of recovery strategies and action plans, and hopefully reduce the imminent threats to its survival.

Section 1

Distinct Population

We believe that the population of the Georgia Depression ecoprovince is distinct based on its geographical circumstances and behavior, and that this population faces an imminent threat to its survival. For the geographical distinction, we rely principally upon the recent work of the Marbled Murrelet Recovery Team (MMRT 2003) and Demarchi and Button (2001).

The population has also displayed behaviors that may be relatively unique: nesting at very far distances inland (Hull et al 2001, Whitworth et al. 2000), and the use of inland lakes (Jones and Manley 2002, Carter and Sealy 1986). Birds have been observed in this region greater than 100km inland (Manley and Cullen 2002). The use of lakes by murrelets may allow birds to nest further inland than they otherwise would be able to (Manley and Cullen 2003, Carter and Sealy 1986, Hobson 1990).

The Marbled Murrelet Recovery Team (MMRT) recognizes the Georgia Depression population as worthy of distinct consideration in recovery planning. It has divided the BC population into 6 conservation regions. The East Vancouver Island and the Southern Mainland Coast are the two regions on either side of the Georgia Strait (MMRT 2003). These two regions have been identified by the MMRT as requiring specific strategies and objectives, because of decline in suitable nesting habitat or population (MMRT 2003):

“In some areas, where populations are most depleted (e.g., East Vancouver Island and Southern Mainland Coast), management objectives should protect a larger portion of existing suitable habitat than in other parts of the BC range...and should also aim to restore habitat in severely depleted areas to provide for a viable sub-population in the long term.” Part B, p.8.

The Recovery Team has recommended that a minimum of 85% of currently (2002) suitable habitat be retained in the Southern Mainland Coast region and 90-95% of currently suitable habitat be retained in the East Vancouver Island region (MMRT 2003). This is compared to a mean of 70% retention across the whole of the coast of BC.

Section 2

Imminent Threat to Survival by Habitat Depletion, long and short term

Currently, the best available information indicates that Marbled Murrelet habitat in the region of the Georgia Depression has been severely depleted.

There are two bodies of research that give us an estimate of original habitat and subsequent decline in the Georgia Depression region: Demarchi and Button, 2001a and b, Marbled Murrelet capability and suitability in British Columbia, and Manley and Jones, 2000, Options for managing the nesting habitat of Marbled Murrelets in the Sunshine Coast Forest District.

According to the Demarchi and Button capability mapping, the two Districts that had a high capability but have had the most severe loss are Duncan, with a 77% reduction, and the Sunshine Coast, with a 70% reduction. These districts cover, respectively, East Vancouver Island (Duncan), and a substantial portion of the Southern Mainland Coast, (i.e. the Sunshine Coast Forest District).

In 2000, Manley and Jones estimated the original range using the productive forest landbase and the amount of suitable habitat left (using forest cover data), for the Sunshine Coast Forest District (SCFD). By identifying potential WHAs that met IWMS 1999 criteria, they found that only 8.6% of original range was still intact.

Although these are estimations, due to unknown variables for previous habitat, the amount of habitat loss indicated is extreme.

In late 2001, the Forest Practices Board (an independent review board for forest practices in BC) commissioned an update for the SCFD, to assess how many potential WHAs that had been identified in 1999 (based on 1995 forest cover data, Manley and Jones 2000) were still intact (FPB 2003). They determined that out of 173 potential WHAs, between 25 and 44% of them were no longer available due to logging and proposed or approved cutblocks. In a subsequent 2003 special investigation report, the Board concluded that:

“However, continuing loss of nesting habitat through forest practices is a major threat. The population along the southern mainland coast is particularly depleted to the point where government has, for some years, deemed it critical to conserve MAMU nesting habitat in that part of the seabird’s range. The population along southeastern Vancouver Island is also seriously depleted. p.3

“There is rapid loss of potential MAMU habitat as harvesting of BC’s old growth forest continues.” p.6.

The FPB recommended interim measures be applied to alleviate this rapid loss, using the best available inventory and assessments, until such time that more detailed work can be undertaken. Although some forest companies have planned around potential WHAs and should be credited for doing so, others have not. The provincial government has not implemented these interim measures.

The following sections outline recent developments in provincial government policy and implementation, providing additional evidence of imminent threat.

Section 3 Threats and limiting factors

The MMRT summarizes threats and limiting factors for the Marbled Murrelet in the Conservation Assessment, Part B, 2003:

Factors limiting Marbled Murrelet populations in BC are not well understood. Demographic models indicate that population size is most sensitive to adult survival, followed by survival of immature birds, and fecundity or nesting success (reviewed in Burger 2002). Murrelets spend most of their lives at sea and they are affected by marine processes (e.g., food availability and perhaps the long term effects of climate change). There are presently few data to identify critical marine problems for murrelets, but this might change with increased research of the birds at sea. The prevailing consensus is that the greatest threats are from loss of nesting habitat in old-growth forests (Ralph et al. 1995, Hull 1999, Burger, 2002). p. 4-5.

Consistent with this assessment, it is the loss of old-growth forest habitat that is the imminent threat to the MAMU population of the Georgia Depression.

Section 4 Is the current policy for protection working?

Despite efforts both within and outside of the provincial government, we believe provincial law, policy and implementation is inadequate to prevent extinction of the Georgia Depression population. Attempts to implement the protections of the Identified Wildlife Management Strategy (IWMS) have resulted in establishment of some wildlife habitat areas (WHAs), but they are far from the target of the MMRT² for the region.

Currently, provincial government policy continues to rely on establishing WHAs for the Marbled Murrelet through the provisions of the IWMS. The IWMS was a policy component of the Forest Practices Code of British Columbia Act, but will be continued under the new Forest and Range Protection Act. However, new provisions introducing longer approval terms for plans (for up to ten years), a weakened plan 'approval test' that repeals the requirement that plans "adequately manage and conserve forest resources," and numerous new procedural hurdles to protect wildlife habitat (Government Actions Regulation), increase the risks to murrelet habitat that have been identified by the Forest Practices Board and Marbled Murrelet Recovery Team and make timely action less probable.

Unfortunately, the process of establishing WHAs has been slow and cumbersome, and for the Georgia Depression population, will not protect enough habitat in the short-term and will eliminate options for long-term protection. This was the finding of the Forest Practices Board, which released a special investigation report in 2003. The Board concluded that "...at least in areas like the southern mainland where MAMU were already severely depleted, the WHA designation procedure in the Code has been too slow to be effective." FPB 2003, p.6.

² Note MMRT terms of reference were to slow decline, not recovery.

The following examples illustrate how approved logging cutblocks in murrelet habitat and the lack of future inventory goals combine to comprise an imminent threat to the Georgia Depression population.

Example 1: Brittain Landscape Unit

The Brittain landscape unit provides an example of how the Recovery Team's target is not being met through the establishment of WHAs. In 2002, an analysis of the options for WHA designation in the Brittain landscape unit was prepared by Dave Dunbar, regional wildlife biologist of the Ministry of Water, Land and Air Protection. Using the specified criteria from the draft IWMS and the MMRT Part B, 17 forest polygons were identified as suitable habitat comprising total of 1661.2 hectares. This is 6.5% of the total productive forest area in this LU (25,475.9 has). To meet the 85% target of the Recovery Team, 1412 hectares would need to be protected in WHAs. The Deputy Minister of Ministry of Water, Land and Air Protection (Statutory Decision Maker) approved only the areas without proposed logging, comprising 12 of the WHAs, totaling only 945.6 has. This comprises 3.7% of the total productive forest in the Brittain Landscape Unit.

The WHA with the only confirmed nests in the Landscape Unit and a number of occupied sites was not approved.

The Deputy Minister of MWLAP declined to protect the minimum area, and gave as a rationale that 12 approved logging cutblocks overlapping the non-approved polygons. Licensees for these cutblocks, International Forest Products and the provincial government's own Small Business Forest Enterprise Program, declined to forgo their approval to log in these areas. The Deputy Minister stated that the southern mainland region may be able to make up the shortfall in other areas, however there is no evidence to support this. He was concerned that approving the WHAs "would expose the crown to litigation and compensation matters." (rationale document, 2003)

Example 2: Jervis Landscape Unit

In the Jervis Landscape Unit, adjacent to the Brittain, the currently suitable habitat has been identified and totals 5433.2 has (14.5% of the total productive forest of 37,402 has). There are currently 56 approved cutblocks within this habitat. If the provincial government will not approve WHAs over approved cutblocks (i.e. as in the Brittain example), the 85% minimum target of the Recovery Team will not be met in this landscape unit. International Forest Products has the majority of blocks, with 27 in the good and superior polygons.³ Occupied stands have been located within this landscape unit (Crocker and Manley 1997, Jones and Manley 2001). In addition, Cullen (2002) reported a statistically significant decrease in radar counts of murrelets (between survey years 2001 and 2002) at watersheds in Jervis Inlet.

Example 3: Surveys and protection of known nesting and occupied sites

³ Source: Forest Development Plan overlay with Marbled Murrelet polygons from WLAP by Sunshine Coast Conservation Association, 2003.

Nest sites and occupied sites are the best information available on murrelet use of a particular stand. From Hull 1999 “conservation needs of Marbled Murrelets (should) include protection of nest sites and occupied stands in the interim until conservation and habitat plans are developed...” (Appendum). Establishing the presence of nest sites and/or occupancy is one of the final recommended steps to be completed prior to WHA designation (IWMS draft 2003).

There have been inventories of Marbled Murrelets throughout the Sunshine Coast Forest District. Radar surveys in 2001 (Manley and Cullen 2001) established relative population densities by landscape unit and watershed. Populations are already extremely low in some landscape units of the SCFD.⁴ (See Table 2) In addition, bird populations and habitat associations within Desolation Sound have been relatively well studied using a variety of methodologies including audio-visual surveys and radio-telemetry (Manley 1999, Bradley 2002, Cooke 1999 and others). Utilizing locations of nest and occupied stands available, data was overlapped with locations of approved WHAs.⁵

Results from Crocker and Manley 1997, McKeown et al.1998, Manley and Jones 1999, Jones and Manley 2001 and MRSM 2002 are summarized below:

- Of the 121 nests located by radio-telemetry, only 4 (3.3%) are within the 23 designated WHAs for Marbled Murrelets.
- 35 nests were located by tree climbing. Of these, 31 are within the Bunster LU. The number of nests within existing WHAs is unknown, but it is likely that some are within approved WHAs. The remaining 4 are within the Brittain LU and are not within an approved WHA due to conflicts with approved logging cutblocks.
- 48 occupied stands were reported.
 - 27 (maximum) may be protected. Some of these are protected within parks (maximum possible 7), and an unknown number are within WHAs in the Bunster LU (maximum possible 17). Three known occupied sites are protected within one WHA in the Brittain (WHA number 2-003).
 - 21 occupied sites (44%) have not been protected in WHA's. These sites are located within the following Landscape Units: Brittain (6 sites), Chapman (5 sites), Cortes (1 site), Homfray (2 sites), Jervis (2 sites), Narrows (1 site), Salmon (2 sites) and the Skwawka (2 sites).

Example 4: Number of WHAs established to date

Since the release of the IWMS in 1999, a total of only 23 WHAs, within 5 Landscape Units, have been approved for Marbled Murrelets within habitat of the Georgia Depression population. Wildlife Habitat Areas are to be established through establishment of Old Growth Management Areas, utilizing a portion of the 1% timber supply impact budget for Identified Wildlife on the Timber Harvesting Land Base

⁴ Narrows, Salmon, Chapman and Howe landscape units.

⁵ It is noted that Manley (1999) reported 52 nest sites and 54 occupied sites within the SCFD. Analysis of the overlap between these sites and approved WHAs was not completed in time for the preparation of this report. It is recognized that a number of these sites are likely within the Bunster WHAs.

(THLB) and establishment of WHAs on the non-contributing land base (Letter of Clarification, 2004). Jones and Manley (2001) found that inoperable stands (non-contributing) had significantly lower frequencies of total, visual, and occupied detections of murrelets. Also, data from habitat transects had significantly lower density of trees with platforms and fewer platforms. The data indicate that WHAs situated entirely in non-contributing forest on the Sunshine Coast were likely to provide sub-optimal habitat which appeared to be used by fewer Marbled Murrelets (Burger 2002). Within all approved WHAs (Table 1), 93.5% of the total area is in the non-contributing land base.

Number of WHAs established on East Vancouver Island- none

Number of WHAs established on the Southern Mainland Coast- 23

- Total hectares within approved WHAs is 4642.6 hectares
- 7 (30% of all WHAs) contain known nests and/or occupied detections
- 4 (17% of all WHAs) have never been field-verified to ensure that suitable habitat structure exists or to determine murrelet use.

It is unlikely that WHAs in the non-contributing forest contain the most suitable habitat available for murrelets in these areas. The IWMS (draft 2003) recommends that areas that are least likely (or sub-optimal habitat) should only be considered if there is evidence of nesting (nests, eggshells or occupied detections), or strong evidence that the particular site provides the necessary microhabitat attributes. Only one WHA in the Brittain has documented occupied detections and it is possible that the 6 WHAs within the Bunster LU are utilized by murrelets. No other approved WHAs (n=17) are known to contain nesting murrelets.

Section 5 Expected and continued threats

From the COSEWIC status update by Hull (1999), "...if there is inadequate protection of the species, and action is not taken to reduce the anthropogenic impacts, Marbled Murrelets are likely to become extirpated in many areas" p. 36.

Future threats to this population include:

1. Few proposed projects and inventories of murrelet populations and habitat within the Georgia Depression. It is not known how WHA identification is to be completed, through an intensive process of habitat identification and analysis, within existing proposed projects.
2. Provincial refusal to protect known sites where conflicts with logging exist
3. The elimination of suitable habitat prior to its designation as murrelet habitat. From Forest Practices Board Special Report (2003), "...future options for MAMU habitat conservation have been rapidly lost. There is a risk that similar detrimental delays will continue under the *Forest and Range Practices Act* regulatory regime". p.11.

4. The provincial government recently issued direction on Marbled Murrelet Conservation in BC. It recognized that the Marbled Murrelet Conservation Assessment (Burger 2002, MMRT 2003) incorporates "...the latest science on [Marbled Murrelets] and represents the consensus of the multi-stakeholder MMRT...". However, "the conclusions and recommendations contained in Parts B and C of the Conservation Assessment have not been adopted as government policy" (Letter of Clarification 2004). Instead, the government is going to continue with its current policy for Marbled Murrelet WHA establishment. This policy has been shown to be largely ineffective. Proposed future government direction will assess the social, economic and environmental impacts of a range of habitat protection options. It is unknown how long this process will take and it is unlikely to protect significant amounts (i.e. approaching the 85% target) of suitable habitat in the short-term.

5. The Chilliwack and Squamish Forest Districts are part of the Southern Mainland Coast Region. To date, few inventories of murrelets have been conducted. Little, if any, murrelet habitat identification has been completed and no WHAs for murrelets have been designated.

Conclusion

We request that, based on this evidence of

- 1) a distinct population
- 2) severely depleted habitat and population
- 3) imminent loss of the remaining habitat in these areas,
- 4) current and future policy unable to prevent further decline,

that COSEWIC assess the threat of the Georgia Depression population of the Marbled Murrelet for the purpose of having the species listed on an emergency basis under subsection 29(1) as an endangered species.

Thank-you for the opportunity to submit this petition for your consideration.

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Table 1: Approved Wildlife Habitat Areas for Marbled Murrelets within the Georgia Depression. From MWLAP website

Forest District	Landscape Unit	Date WHA Approved	Size of WHA (in hectares)	Amount of THLB (ha)	Amount in Non-Contributing (ha)
Sunshine Coast	Brittain	04/07/2003	265.8	19.5	246.3
Sunshine Coast	Brittain	04/07/2003	50.4	40.7	9.7
Sunshine Coast	Bute West	06/28/2001	407	0	407
Sunshine Coast	Southgate	06/28/2001	205	0	205
Sunshine Coast	Southgate	07/26/2001	335	14	321
Sunshine Coast	Quatam	07/26/2001	259	4	255
Sunshine Coast	Brittain	12/20/2001	342	0	342
Sunshine Coast	Bunster	06/18/2002	606	0	606
Sunshine Coast	Bunster	06/18/2002	179	0	179
Sunshine Coast	Bunster	06/18/2002	87	0	87
Sunshine Coast	Bunster	06/18/2002	1043	0	1043
Sunshine Coast	Bunster	06/18/2002	64	0	64
Sunshine Coast	Bunster	06/18/2002	170	0	170
Sunshine Coast	Brittain	05/15/2003	54.3	6.9	47.4
Sunshine Coast	Brittain	05/15/2003	87	43.9	43.1
Sunshine Coast	Brittain	05/15/2003	42.2	16.7	25.5
Sunshine Coast	Brittain	05/15/2003	92.3	23.1	69.2
Sunshine Coast	Brittain	05/15/2003	51.7	0.4	51.3
Sunshine Coast	Brittain	05/15/2003	66.4	4	62.4
Sunshine Coast	Brittain	05/15/2003	31.1	8.3	22.8
Sunshine Coast	Brittain	05/15/2003	12.5	8.2	4.3
Sunshine Coast	Brittain	05/15/2003	121.3	86	35.3
Sunshine Coast	Brittain	05/15/2003	70.6	27.8	42.8
TOTAL			4642.6	303.5 (6.5%)	4339.1 (93.5%)

Table 2

Number of Marbled Murrelets using watersheds within landscape units of the SCFD. From Manley and Cullen, 2001.

Maximum Predawn Incoming	Watershed Name	Biodiversity Score	Relative Priority for Planning	BEO Designation	Landscape Unit	L.U. Number
435	Toba River	42	13	H	Toba	207
343	Brem River	35	9	I	Brem	206
212	Forbes Vancouver River	24 33	20	I	Homfray	209
197			5	I	Jervis	219
171	Quatam Brittain River	23 27	7	I	Quatam	208
159			8	I	Brittain	218
155	Skwawka	37	2	H	Skwawka	213
146	Orford Paradise River	32 32	12	I	Bute East	205
129			19	I	Bute West	202
107	Deserted River	33	5	I	Jervis	219
103	Homathko	36	4	H	Homathko	201
99	Bear River	32	19	I	Bute West	205
99	Powell- Daniels	31	17	I	Powell- Daniels	211
95	Southgate	35	16	H	Southgate	203
43	Hunaechin	37	2	H	Skwawka	213
40	Tahumming Tzoonie River	35 23	9	H	Brem	206
38			14	I	Narrows	223
31	Teaquahan Theodosia Inlet	36 18	4	H	Homathko	201
16			1	I	Bunster	215
12	Clowham River	26	15	I	Salmon	224
10	Lausmann	36	4	H	Skwawka	213
10	Mit Creek	35	9	I	Brem	206
8	Dakota P.L.I. – Loquilts River	14	3	L	Chapman	225
8						
7	Rainy River	14	3	L	Howe	226
4	High Creek	33	5	I	Jervis	219
1	McNab	14	3	L	Howe	226