

Photoweeek Northwest

CALENDAR 2019/2020—

WHITEBARKS OF THE

WALLOWAS—*the*

*radical decline of
a keystone species...*

photos & texts
by **Cliff Crego**

*Whitebarks, looking out
on (Lost) Glacier Peak,
summit of Eagle Cap
(2900 m.)*


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Healthy WHITEBARK Pine (*Pinus albicaulis*) 2500 m. **(Lost) Glacier Lake.**
Center of the **Eagle Cap Wilderness**, OREGON, a temporary refuge from
rising temperatures & declining snowpack (historic average \pm 12 m.)

J A N U A R Y 2 0 1 9

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
	30	31	1	2	3	4	5	
	6	7	8	9	10	11	12	
	13	14	15	16	17	18	19	
	20	21	22	23	24	25	26	
	27	28	29	30	31	1	2	
	3	4	5	6	7	<div> <div>December</div> <div> <div>230</div> <div>331</div> <div>4</div> <div>526</div> <div>627</div> <div>728</div> <div>829</div> </div> </div> <div> <div>February</div> <div> <div>317</div> <div>418</div> <div>519</div> <div>620</div> <div>721</div> <div>822</div> <div>923</div> </div> </div>		



Healthy WHITEBARK Pine 2440 m. Krag PEAK Basin with Red MOUNTAIN.
On **Greenstone**, at 1/4 of a billion years, the oldest rocks in the incredibly rich
geology of of the **WALLOWAS.**

F E B R U A R Y 2 0 1 9

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
	<div>January</div> <div>1 2 3 4 5</div> <div>6 7 8 9 10 11 12</div> <div>13 14 15 16 17 18 19</div> <div>20 21 22 23 24 25 26</div> <div>27 28 29 30 31</div>	<div>March</div> <div>1 2</div> <div>3 4 5 6 7 8 9</div> <div>10 11 12 13 14 15 16</div> <div>17 18 19 20 21 22 23</div> <div>24 25 26 27 28 29 30</div> <div>31</div>	29	30	31	1	2	
	3	4	5	6	7	8	9	
	10	11	12	13	14	15	16	
	17	18	19	20	21	22	23	
	24	25	26	27	28	1	2	
	3	4	5	6	7	8	9	

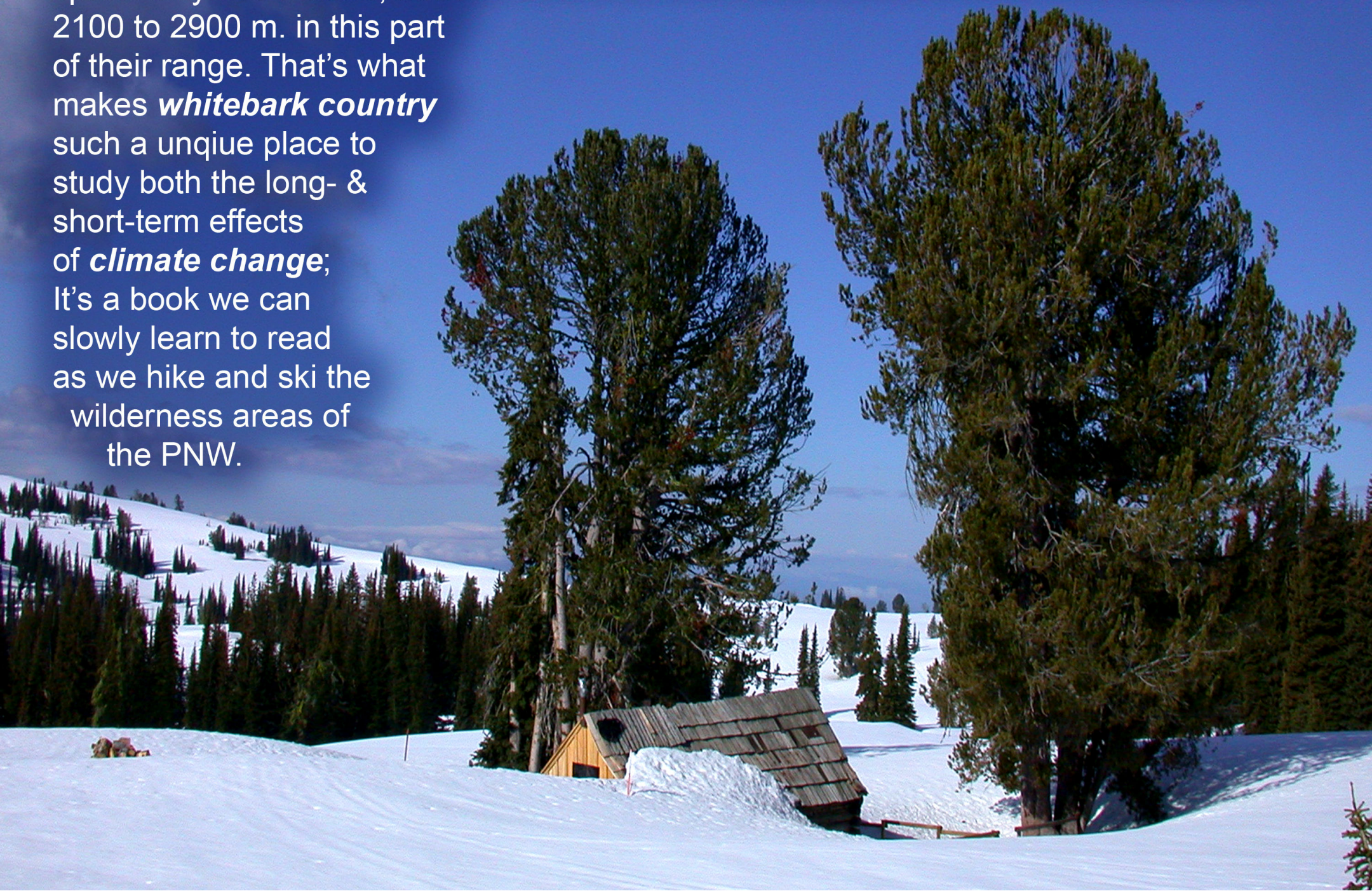


Blue Dragon Tarn, 2380 m. Krag PEAK (2700 m) in the background. This is a typical Whitebark Pine Country tree-silhouette, showing rounded form of whitebark with its upturned branches, the narrow Spire Fir, & wider Fiddle-top Spruce

M A R C H 2 0 1 9

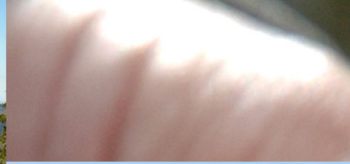
	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
	February 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28	April 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	26	27	28	1	2	
	3	4	5	6	7	8	9	
	10	11	12	13	14	15	16	
	17	18	19	20	21	22	23	
	24	25	26	27	28	29	30	
	31	1	2	3	4	5	6	

Oldgrowth Whitebark Pines (± 300 years) in the South WALLOWAS at 2240 meters. Just **100 m. lower in altitude** = 1 c. **warmer temps**; Here, **the whitebarks “click out,”** giving way to **Doug-fir** and **Ponderosa Pine**. So their entire **bandwidth in elevation** spans only 800 meters, from 2100 to 2900 m. in this part of their range. That’s what makes **whitebark country** such a unique place to study both the long- & short-term effects of **climate change**; It’s a book we can slowly learn to read as we hike and ski the wilderness areas of the PNW.



A P R I L 2 0 1 9

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday		
	31	1	2	3	4	5	6		
	7	8	9	10	11	12	13		
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WHITEBARK PINE
COLLAPSE—
*the tragic story of
Climate Chaos
& the sudden
die-back of the PNW's
oldest Trees*




On the web at picture-poems.com/whitebarks



Mt Pine Beetle (*Dendroctonus ponderosae*) With **a hotter, drier climate**, Mt Pine Beetles—which are native—have become what we might call. “*native invasives*.” **Lodgepole pine** co-evolved with the beetle; **Whitebarks**, growing at higher, historically colder altitudes, **did not**, so they have fewer defenses against them.

M A Y 2 0 1 9

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
	28	29	30	1	2	3	4	
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	12	13	14	15	16	17	18	
	19	20	21	22	23	24	25	
	26	27	28	29	30	31	1	
	2	3	4	5	6	<div>April123456789101112131415161718192021222324252627282930</div>	<div>June123456789101112131415161718192021222324252627282930</div>	



WHITEBARK PINES at c. **2,900 meters**, *Eagle Cap Wilderness*

Seen from the top of *(Lost) Glacier Peak*. In the **WALLOWAS**, this is as high as it gets.

The icefield seen below is all that remains of the once famous **BENSON GLACIER**, which lost its official status as a glacier already in 1937. With **Climate Change** in Northeast OREGON, we are losing—or have already lost—all multi-year ice.

This is the alpine equivalent of the loss of **arctic sea ice**, and is one of the main reasons why the higher you climb, in the mountains, the worse the warming gets.

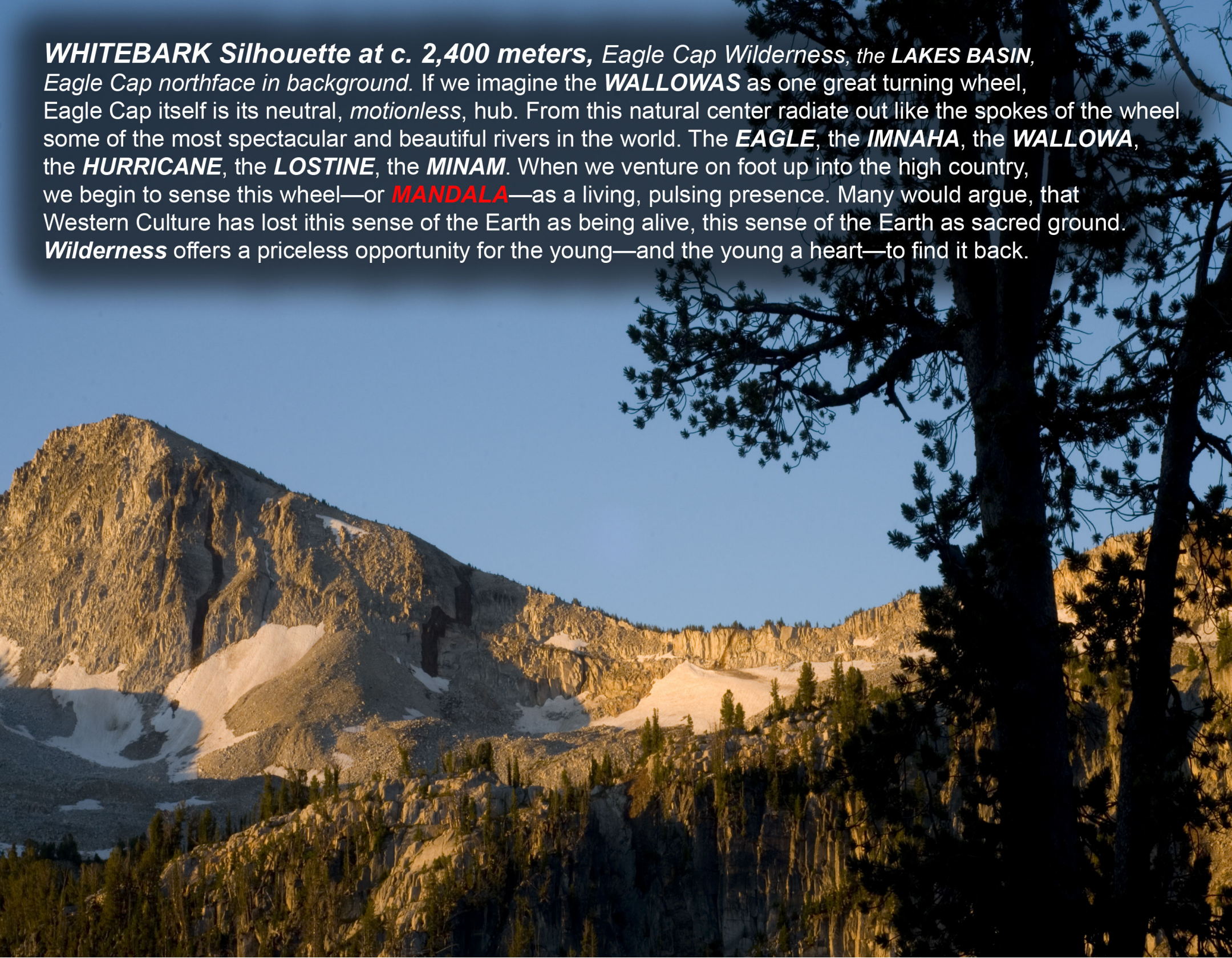
Why? Mostly because we have lost the reflectivity—**the albedo**—of the white surface.

So now *the Sun's energy is absorbed*—like putting on a black shirt in summer—greatly amplifying the negative effects of an already hotter, drier climate.

J U N E 2 0 1 9


	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
	<div>May</div> <div>12345678910111213141516171819202122232425262728293031</div>	<div>July</div> <div>12345678910111213141516171819202122232425262728293031</div>	28	29	30	31	1	
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	9	10	11	12	13	14	15	
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	23	24	25	26	27	28	29	
	30	1	2	3	4	5	6	

WHITEBARK Silhouette at c. 2,400 meters, Eagle Cap Wilderness, the LAKES BASIN, Eagle Cap northface in background. If we imagine the **WALLOWAS** as one great turning wheel, Eagle Cap itself is its neutral, *motionless*, hub. From this natural center radiate out like the spokes of the wheel some of the most spectacular and beautiful rivers in the world. The **EAGLE**, the **IMNAHA**, the **WALLOWA**, the **HURRICANE**, the **LOSTINE**, the **MINAM**. When we venture on foot up into the high country, we begin to sense this wheel—or **MANDALA**—as a living, pulsing presence. Many would argue, that Western Culture has lost this sense of the Earth as being alive, this sense of the Earth as sacred ground. **Wilderness** offers a priceless opportunity for the young—and the young a heart—to find it back.



J U L Y 2 0 1 9

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday				
	30	1	2	3	4	5	6				
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	14	15	16	17	18	19	20				
	21	22	23	24	25	26	27				
	28	29	30	31	1	2	3				
	4	5	6	7	8	<div>June123456789101112131415161718192021222324252627282930</div>			<div>August12345678910111213141516171819202122232425262728293031</div>		



WHITEBARK Pines, at a crossing between ***HIDDEN LAKE*** & the reservoir at the northend of ***MIDDLE*** (or 'MAIN') ***EAGLE***, fall aspect

A U G U S T 2 0 1 9

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
	<div>July</div> <div>12345678910111213141516171819202122232425262728293031</div>	<div>September</div> <div>123456789101112131415161718192021222324252627282930</div>	30	31	1	2	3	
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	11	12	13	14	15	16	17	
	18	19	20	21	22	23	24	
	25	26	27	28	29	30	31	
	1	2	3	4	5	6	7	

LIMBER PINE (*Pinus flexilis*), a 5-needle close relative of **WHITEBARKPINE**. On a wind-swept ridge on **RUBY PEAK**. The town of **JOSEPH, OREGON**, & **WALLOWA LAKE**, below



S E P T E M B E R 2 0 1 9

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	15	16	17	18	19	20	21	
	22	23	24	25	26	27	28	
	29	30	1	2	3	4	5	
	6	7	8	9	10	<div>August12345678910111213141516171819202122232425262728293031</div>		<div>October12345678910111213141516171819202122232425262728293031</div>



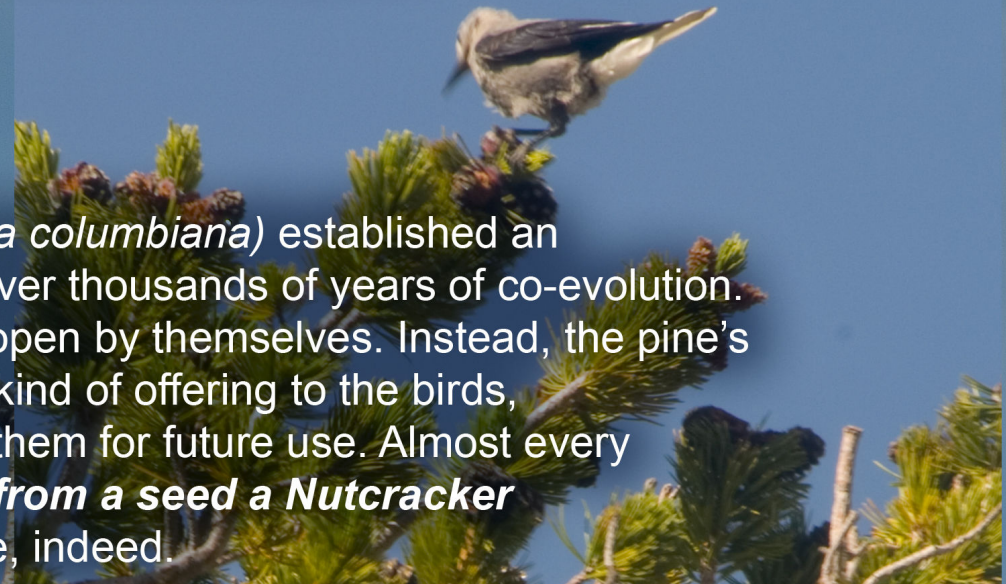
Nutcrackers—a **Corvid** or **Crow-like bird**—have one of the most amazing spatial memories in the animal kingdom. They store seeds first in a **sublingual pouch**, and then bury them in small caches, which they then return to as needed, even when under a deep snowpack.



Nutcrackers are year-round residents of the high-country, and cover territories as **large as 400 km²**. The danger of **Whitebark decline** is that it quickly devolves into fewer seeds, leading to fewer birds, leading to fewer and fewer new pines.

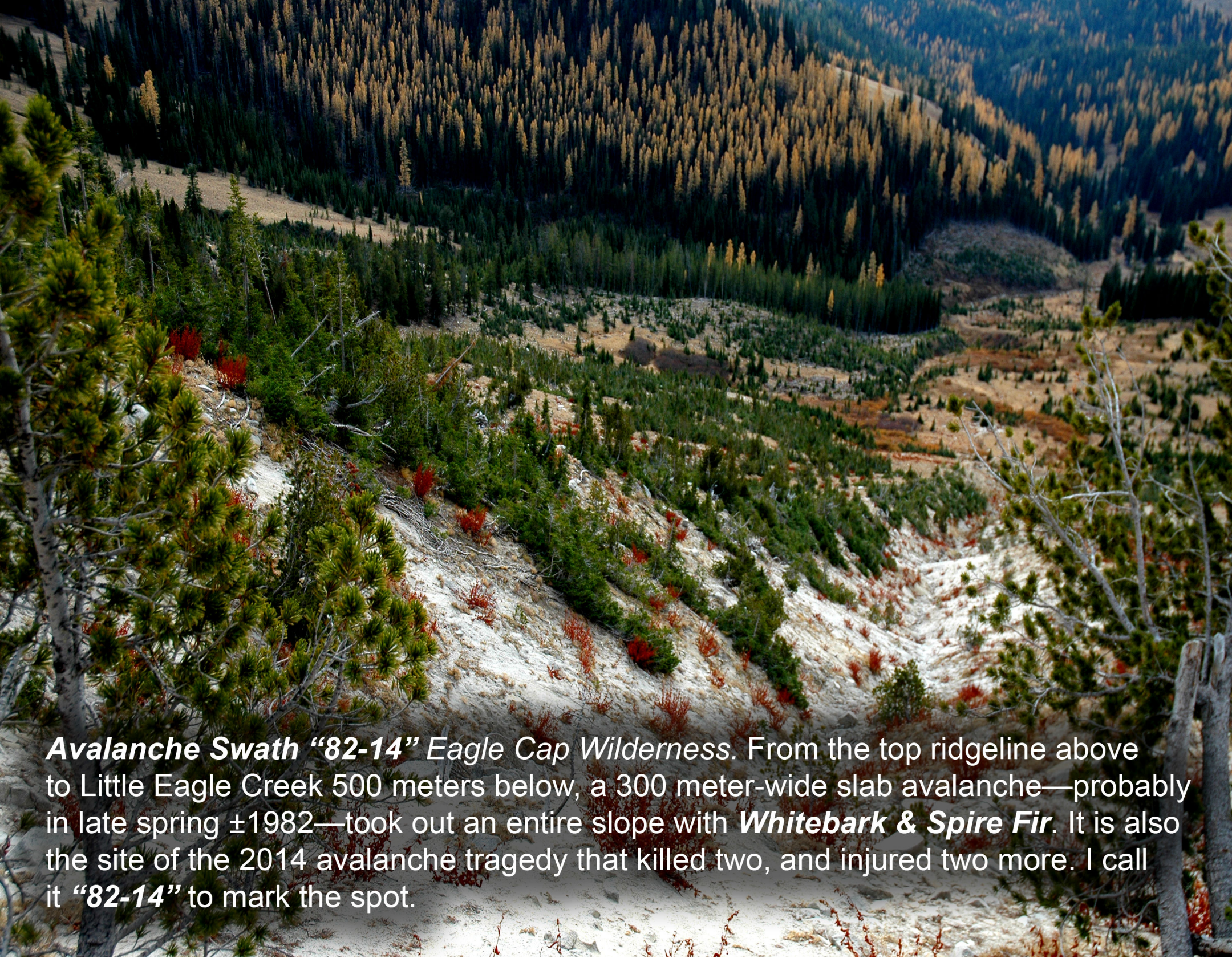


Whitebark Pines & Clark's Nutcrackers (*Nucifraga columbiana*) established an extraordinary relationship of **mutual dependence** over thousands of years of co-evolution. The Whitebark's **large, deep purple cones** do not open by themselves. Instead, the pine's branches sweep upward towards the heavens as a kind of offering to the birds, who readily harvest the nutritious seeds and cache them for future use. Almost every Whitebark we encounter in the high-country **stems from a seed a Nutcracker didn't**—for whatever reason—**retrieve**. Remarkable, indeed.



O C T O B E R 2 0 1 9


	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
	29	30	1	2	3	4	5	
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	20	21	22	23	24	25	26	
	27	28	29	30	31	1	2	
	3	4	5	6	7	<div>September123456789101112131415161718192021222324252627282930</div>	<div>November123456789101112131415161718192021222324252627282930</div>	



Avalanche Swath “82-14” Eagle Cap Wilderness. From the top ridgeline above to Little Eagle Creek 500 meters below, a 300 meter-wide slab avalanche—probably in late spring \pm 1982—took out an entire slope with **Whitebark & Spire Fir**. It is also the site of the 2014 avalanche tragedy that killed two, and injured two more. I call it “82-14” to mark the spot.

N O V E M B E R 2 0 1 9

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
	<div>October</div> <div>12345678910111213141516171819202122232425262728293031</div>	<div>December</div> <div>12345678910111213141516171819202122232425262728293031</div>	29	30	31	1	2	
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	10	11	12	13	14	15	16	
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	24	25	26	27	28	29	30	
	1	2	3	4	5	6	7	

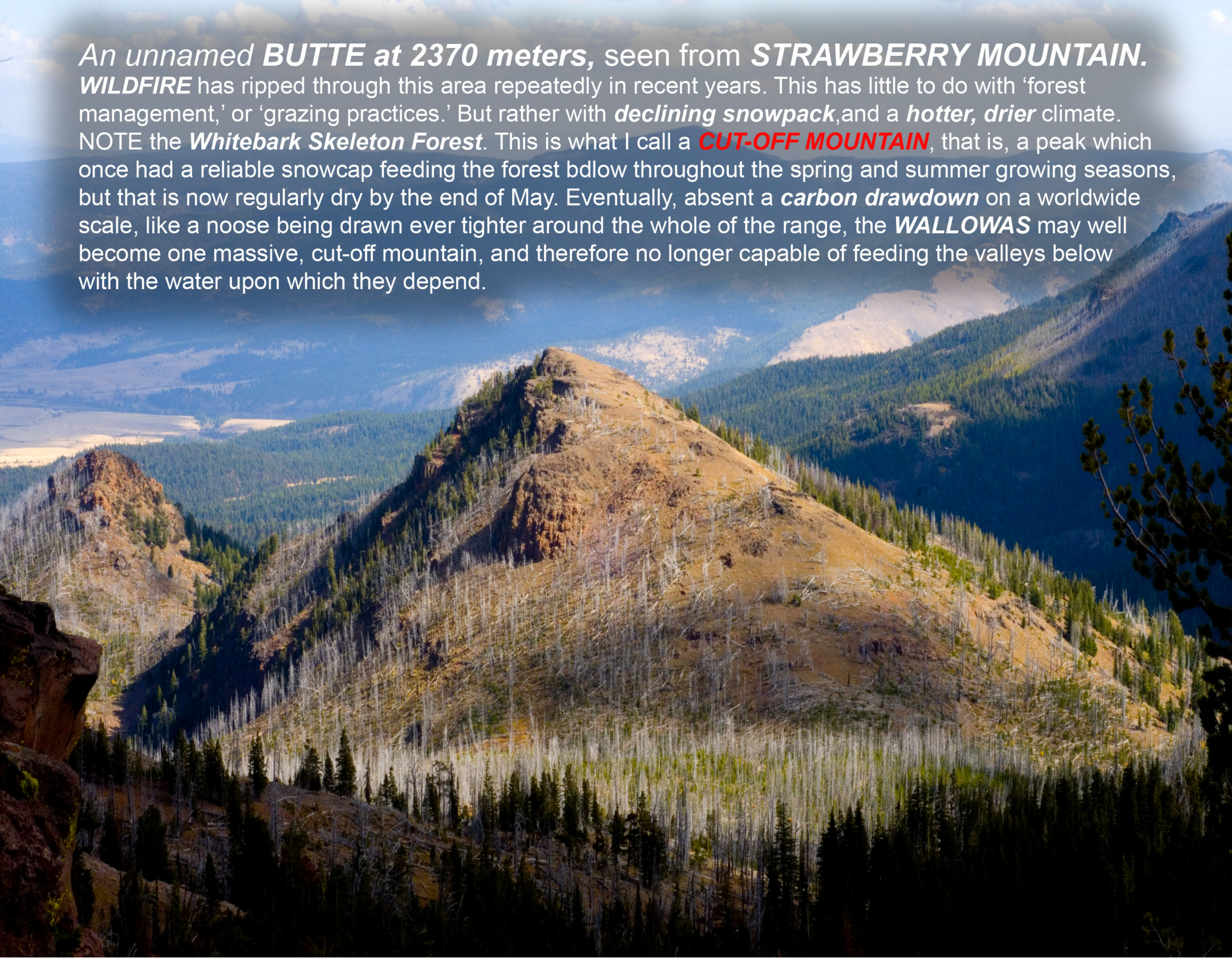


WHITEBARK PINE Burl, **Pop Creek Pass**,
HIDDEN LAKE, Eagle Cap Wilderness, OREGON.
The lake below at ± 2100 meters is at the bottom
of the whitebark's *altitude bandwidth*.
Here, the trees are already disappearing.

D E C E M B E R 2 0 1 9

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
	1	2	3	4	5	6	7	
	8	9	10	11	12	13	14	
	15	16	17	18	19	20	21	
	22	23	24	25	26	27	28	
	29	30	31	1	2	3	4	
	5	6	7	8	9	<div>November<div>123456789101112131415161718192021222324252627282930</div></div>	<div>January<div>12345678910111213141516171819202122232425262728293031</div></div>	

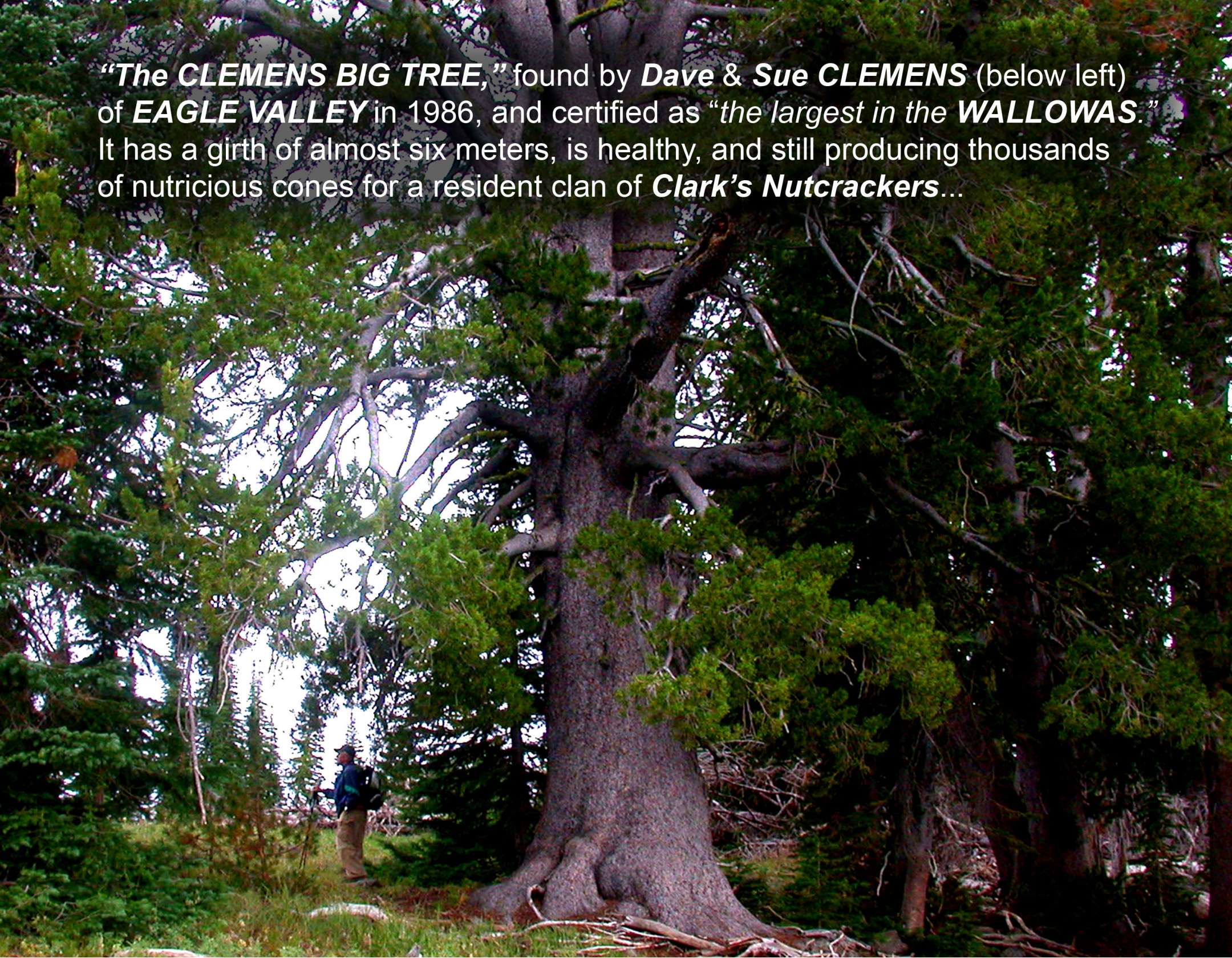
An unnamed **BUTTE** at 2370 meters, seen from **STRAWBERRY MOUNTAIN**. **WILDFIRE** has ripped through this area repeatedly in recent years. This has little to do with 'forest management,' or 'grazing practices.' But rather with *declining snowpack*, and a *hotter, drier* climate. NOTE the *Whitebark Skeleton Forest*. This is what I call a **CUT-OFF MOUNTAIN**, that is, a peak which once had a reliable snowcap feeding the forest below throughout the spring and summer growing seasons, but that is now regularly dry by the end of May. Eventually, absent a *carbon drawdown* on a worldwide scale, like a noose being drawn ever tighter around the whole of the range, the **WALLOWAS** may well become one massive, cut-off mountain, and therefore no longer capable of feeding the valleys below with the water upon which they depend.



J A N U A R Y 2 0 2 0

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
	29	30	31	1	2	3	4	
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	12	13	14	15	16	17	18	
	19	20	21	22	23	24	25	
	26	27	28	29	30	31	1	
	2	3	4	5	6	<div>December12345678910111213141516171819202122232425262728293031</div>	<div>February1234567891011121314151617181920212223242526272829</div>	

“The CLEMENS BIG TREE,” found by ***Dave & Sue CLEMENS*** (below left) of ***EAGLE VALLEY*** in 1986, and certified as ***“the largest in the WALLOWAS.”*** It has a girth of almost six meters, is healthy, and still producing thousands of nutritious cones for a resident clan of ***Clark’s Nutcrackers...***



F E B R U A R Y 2 0 2 0

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
	<div>January</div> <div>12345678910111213141516171819202122232425262728293031</div>	<div>March</div> <div>12345678910111213141516171819202122232425262728293031</div>	28	29	30	31	1	
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	9	10	11	12	13	14	15	
	16	17	18	19	20	21	22	
	23	24	25	26	27	28	29	
	1	2	3	4	5	6	7	

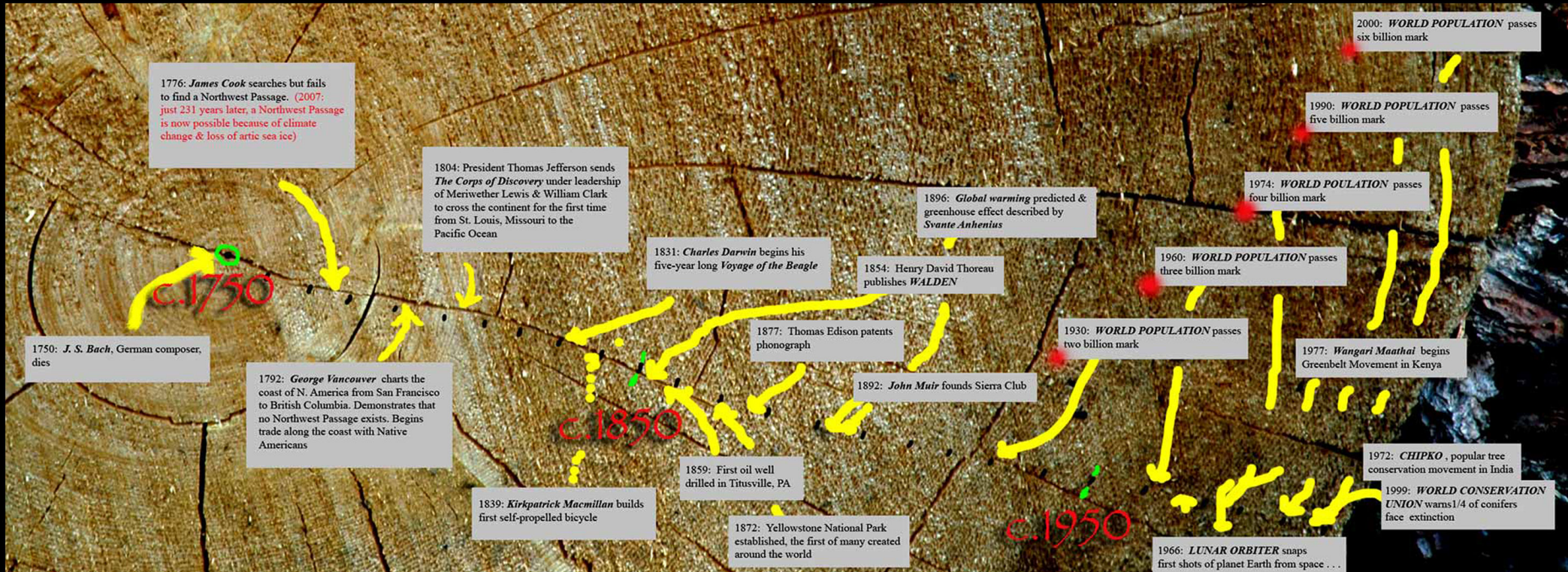
“The CHIEF JOSEPH SMALL TREE,” solo climber at 2900 meters, perhaps the smallest, toughest, most exposed pine in the **WALLOWAS**. Atop ***Hin-mah-too-yah-lat-keht*** (aka Mt Chief JOSEPH)



M A R C H 2 0 2 0

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday			
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	15	16	17	18	19	20	21			
	22	23	24	25	26	27	28			
	29	30	31	1	2	3	4			
	5	6	7	8	9	<div><div>February</div><div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div><div>6</div><div>7</div><div>8</div><div>9</div><div>10</div><div>11</div><div>12</div><div>13</div><div>14</div><div>15</div><div>16</div><div>17</div><div>18</div><div>19</div><div>20</div><div>21</div><div>22</div><div>23</div><div>24</div><div>25</div><div>26</div><div>27</div><div>28</div><div>29</div></div></div>		<div><div>April</div><div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div><div>6</div><div>7</div><div>8</div><div>9</div><div>10</div><div>11</div><div>12</div><div>13</div><div>14</div><div>15</div><div>16</div><div>17</div><div>18</div><div>19</div><div>20</div><div>21</div><div>22</div><div>23</div><div>24</div><div>25</div><div>26</div><div>27</div><div>28</div><div>29</div><div>30</div></div></div>		

250 years of tree-time, seen from the perspective of a Whitebark pine



The great acceleration into oblivion... . ??

Since c. 1950, most world indices of change have been following **strikingly exponential trajectories**. Note the **red dots** above, each marking **1,000,000,000 additional people** on planet Earth. Clearly, from the Whitebark's point of view, we humans have a problem with **Natural Limit**. As an ultimate irony—or is it really more hubris?—we are rightly concerned about the Whitebarks survival, while at the same time failing to really see the obvious and logically necessary signs of cultural collapse and perhaps even human extinction in evidence all around us.

A P R I L 2 0 2 0

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
	29	30	31	1	2	3	4	
	5	6	7	8	9	10	11	
	12	13	14	15	16	17	18	
	19	20	21	22	23	24	25	
	26	27	28	29	30	1	2	
	3	4	5	6	7	<div>March</div> <div>12345678910111213141516171819202122232425262728293031</div>	<div>May</div> <div>345678910111213141516171819202122232425262728293031</div>	

WHITEBARK PINE at 2250 m. Remarkably, this is the bottom of their *altitude bandwidth*, here. *Skiing* or *snowshoeing* down from this point, we leave the realm of the whitebark behind, and enter that of the Ponderosa Pine & Doug-fir.



M A Y 2 0 2 0

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
	<div>April</div> <div>123456789101112131415161718192021222324252627282930</div>	<div>June</div> <div>123456789101112131415161718192021222324252627282930</div>	28	29	30	1	2	
	3	4	5	6	7	8	9	
	10	11	12	13	14	15	16	
	17	18	19	20	21	22	23	
	24	25	26	27	28	29	30	
	31	1	2	3	4	5	6	



Whitepine Blister Rust (*Cronartium ribicola*)...a devastating non-native invasive fungus introduced by accident to North America ± 1910 , has a complex life cycle. Shown here at various stages of infecting Whitebark Pines...

J U N E 2 0 2 0

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday			
	31	1	2	3	4	5	6			
	7	8	9	10	11	12	13			
	14	15	16	17	18	19	20			
	21	22	23	24	25	26	27			
	28	29	30	1	2	3	4			
	5	6	7	8	9	<div>May</div> <div><div>3456789</div><div>10111213141516</div><div>17181920212223</div><div>24252627282930</div><div>31</div></div>		<div>July</div> <div><div>1234</div><div>567891011</div><div>12131415161718</div><div>19202122232425</div><div>262728293031</div></div>		



WHITEBARK PINE at 2900 m.,
atop of ***EAGLE CAP***, looking out on
(LOST) GLACIER PEAK

J U L Y 2 0 2 0


	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
	28	29	30	1	2	3	4	
	5	6	7	8	9	10	11	
	12	13	14	15	16	17	18	
	19	20	21	22	23	24	25	
	26	27	28	29	30	31	1	
	2	3	4	5	6	<div><div><div>June</div><div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div><div>6</div></div><div><div>7</div><div>8</div><div>9</div><div>10</div><div>11</div><div>12</div><div>13</div></div><div><div>14</div><div>15</div><div>16</div><div>17</div><div>18</div><div>19</div><div>20</div></div><div><div>21</div><div>22</div><div>23</div><div>24</div><div>25</div><div>26</div><div>27</div></div><div><div>28</div><div>29</div><div>30</div></div></div></div> <div><div>August</div><div><div>2</div><div>3</div><div>4</div><div>5</div><div>6</div><div>7</div><div>8</div></div><div><div>9</div><div>10</div><div>11</div><div>12</div><div>13</div><div>14</div><div>15</div></div><div><div>16</div><div>17</div><div>18</div><div>19</div><div>20</div><div>21</div><div>22</div></div><div><div>23</div><div>24</div><div>25</div><div>26</div><div>27</div><div>28</div><div>29</div></div><div><div>30</div><div>31</div></div></div>		

WHITEBARK “tree islands” on **LITTLE EAGLE MEADOWS**. Whitebarks are the pioneer species. **Fiddle-top Spruce** & **Spire Fir** follow, making one of the most beautiful landscapes in the Pacific Northwest. Photograph made at 2450 meters, at **the die-back line** dividing relatively healthy from sick trees. **Snowline** is rising in the **WALLOWAS** about 2 cm. a day, or \pm 10 meters a year, tendency greatly accelerating...



A U G U S T 2 0 2 0

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
	<div>July</div> <div>5678910111213141516171819202122232425262728293031</div>	<div>September</div> <div>6789101112131415161718192021222324252627282930</div>	28	29	30	31	1	
	2	3	4	5	6	7	8	
	9	10	11	12	13	14	15	
	16	17	18	19	20	21	22	
	23	24	25	26	27	28	29	
	30	31	1	2	3	4	5	



HEALTHY WHITEBARKS atop **(LOST)**
GLACIER PEAK....showing at a glance
the entire **altitude bandwidth** of this
endangered keystone species.roughly
2100 to 3000 meters in the **WALLOWAS**.
(In the distance is **HIDDEN LAKE**.) This
difference in elevation = 7 or 9 “**degrees**
of climate....” That is, every 100 meters
you climp **UP**, the temperature goes **DOWN**
by ± 1 degree centigrade. A crucial number
to remember in this era of
disappearing snow & glaciers...

S E P T E M B E R 2 0 2 0

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday		
	30	31	1	2	3	4	5		
	6	7	8	9	10	11	12		
	13	14	15	16	17	18	19		
	20	21	22	23	24	25	26		
	27	28	29	30	1	2	3		
	4	5	6	7	8	<div>August12345678910111213141516171819202122232425262728293031</div>		<div>October12345678910111213141516171819202122232425262728293031</div>	

THE SOUND OF EXTINCTION PROJECT gives endangered species a voice through Music. Here, master Eagle Valley Native American flutemaker, **Dave CLEMENS**, shows off a prototype of his **whitebark flute**. We already have the new music for a **whitebark percussion orchestra**, as well as a **whitebark violin & piano sonata**.



O C T O B E R 2 0 2 0

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
	<div>September</div> <div>123456789101112131415161718192021222324252627282930</div>	<div>November</div> <div>123456789101112131415161718192021222324252627282930</div>	29	30	1	2	3	
	4	5	6	7	8	9	10	
	11	12	13	14	15	16	17	
	18	19	20	21	22	23	24	
	25	26	27	28	29	30	31	
	1	2	3	4	5	6	7	

HEALTHY WHITEBARKS ascending from **HORTON PASS** (top right) at 2,400 meters to the top of **EAGLE CAP** at \pm 2,900 m. It's possible that these higher peaks may become *a refuge* as old-growth whitebarks disappear from the lower, hotter, now drier landscape.



N O V E M B E R 2 0 2 0

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
	1	2	3	4	5	6	7	
	8	9	10	11	12	13	14	
	15	16	17	18	19	20	21	
	22	23	24	25	26	27	28	
	29	30	1	2	3	4	5	
	6	7	8	9	10	<div><div>October</div><div><div>4</div><div>5</div><div>6</div><div>7</div><div>8</div><div>9</div><div>10</div><div>11</div><div>12</div><div>13</div><div>14</div><div>15</div><div>16</div><div>17</div><div>18</div><div>19</div><div>20</div><div>21</div><div>22</div><div>23</div><div>24</div><div>25</div><div>26</div><div>27</div><div>28</div><div>29</div><div>30</div><div>31</div></div></div>	<div><div>December</div><div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div><div>6</div><div>7</div><div>8</div><div>9</div><div>10</div><div>11</div><div>12</div><div>13</div><div>14</div><div>15</div><div>16</div><div>17</div><div>18</div><div>19</div><div>20</div><div>21</div><div>22</div><div>23</div><div>24</div><div>25</div><div>26</div><div>27</div><div>28</div><div>29</div><div>30</div><div>31</div></div></div>	

HEALTHY WHITEBARKS along the northface
of **CORNUCOPIA PEAK** at c. 2600 meters,
the **SOUTH WALLOWAS** (VI.27.2010).

Absent a radical **Carbon Negative Revolution**
these trees are already relics of a more
auspicious, harmonious past climate...

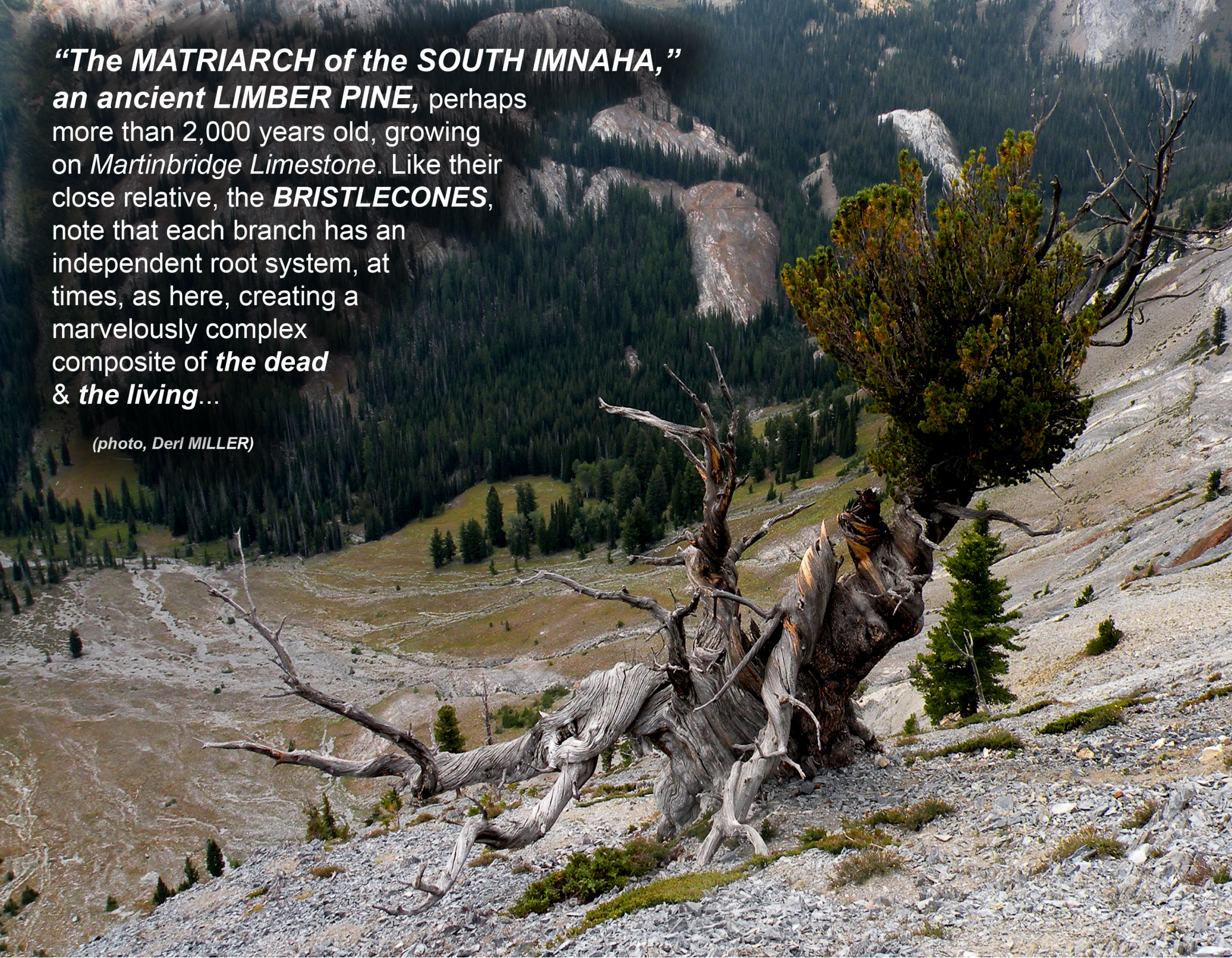


D E C E M B E R 2 0 2 0

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
	29	30	1	2	3	4	5	
	6	7	8	9	10	11	12	
	13	14	15	16	17	18	19	
	20	21	22	23	24	25	26	
	27	28	29	30	31	1	2	
	3	4	5	6	7	<div>November123456789101112131415161718192021222324252627282930</div>	<div>January12345678910111213141516171819202122232425262728293031</div>	

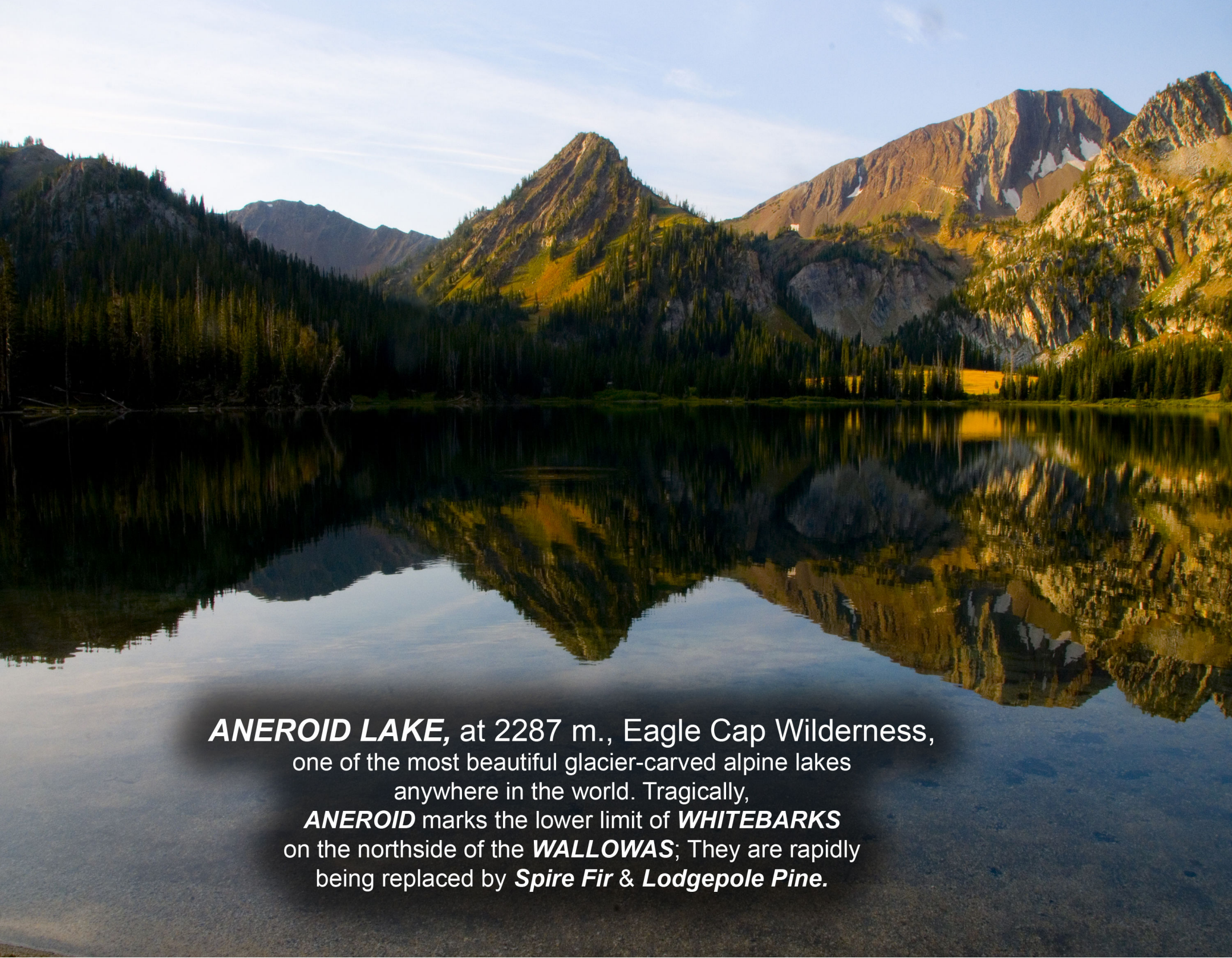
“The MATRIARCH of the SOUTH IMNAHA,”
an ancient LIMBER PINE, perhaps
more than 2,000 years old, growing
on *Martinbridge Limestone*. Like their
close relative, the ***BRISTLECONES***,
note that each branch has an
independent root system, at
times, as here, creating a
marvelously complex
composite of ***the dead***
& ***the living...***

(photo, Derl MILLER)



J A N U A R Y 2 0 2 1

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
	<div>December</div> <div>1 2 3 4 5</div> <div>6 7 8 9 10 11 12</div> <div>13 14 15 16 17 18 19</div> <div>20 21 22 23 24 25 26</div> <div>27 28 29 30 31</div>	<div>February</div> <div>1 2 3 4 5 6</div> <div>7 8 9 10 11 12 13</div> <div>14 15 16 17 18 19 20</div> <div>21 22 23 24 25 26 27</div> <div>28</div>	29	30	31	1	2	
	3	4	5	6	7	8	9	
	10	11	12	13	14	15	16	
	17	18	19	20	21	22	23	
	24	25	26	27	28	29	30	
	31	1	2	3	4	5	6	



ANEROID LAKE, at 2287 m., Eagle Cap Wilderness,
one of the most beautiful glacier-carved alpine lakes
anywhere in the world. Tragically,
ANEROID marks the lower limit of ***WHITEBARKS***
on the northside of the ***WALLOWAS***; They are rapidly
being replaced by ***Spire Fir & Lodgepole Pine***.

F E B R U A R Y 2 0 2 1

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday		
	31	1	2	3	4	5	6		
	7	8	9	10	11	12	13		
	14	15	16	17	18	19	20		
	21	22	23	24	25	26	27		
	28	1	2	3	4	5	6		
	7	8	9	10	11	<div>January</div> <div>345678910111213141516171819202122232425262728293031</div>		<div>March</div> <div>12345678910111213141516171819202122232425262728293031</div>	



Sentinel **WHITEBARK PINE** *krummholz* ("crooked-wood")
at 2,900 m., looking out on, as they have for thousands of years,
(*Lost*) **GLACIER PEAK** and what remains of the former
BENSON GLACIER, These great **NESTORS** of the Pacific Northwest,
Whitebarks have helped create the conditions for humanity's flourishing;
Now, their fate will depend upon how **we** respond in the
coming decades to the demands of
a radically changing climate.

M A R C H 2 0 2 1

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday		
	28	1	2	3	4	5	6		
	7	8	9	10	11	12	13		
	14	15	16	17	18	19	20		
	21	22	23	24	25	26	27		
	28	29	30	31	1	2	3		
	4	5	6	7	8	<div>February</div> <div><div>123456</div><div>78910111213</div><div>14151617181920</div><div>21222324252627</div><div>28</div></div>		<div>April</div> <div><div>123</div><div>45678910</div><div>11121314151617</div><div>18192021222324</div><div>252627282930</div></div>	