Erratum to: Monitoring an ecosystem at risk: What is the degree of grassland fragmentation in the Canadian Prairies?

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The original version of this article unfortunately contained a mistake which stems from the results reported in Table 5 on page 14: There was a miscalculation in the amounts of suitable area in the four fragmentation geometries in the three provinces (the subtraction of the barrier areas was not taken into account). The page numbers relate to the initial online publication dated 04 January 2014. The corrected table is given below.

The online version of the original article can be found at <http://dx.doi.org/10.1007/s10661-013-3557-9>.

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Table 5 Total land cover areas related to grassland for the Prairie Ecozone, Alberta, Saskatchewan, and Manitoba. In the four FGs, the areas taken up by CanVec barriers were subtracted from the total land cover areas to determine the amount of suitable area. In

addition, the median, minimum, and maximum values of the remaining patch sizes of potentially suitable areas (i.e., grassland or related) considered in the four FGs are listed

Total land-cover amount (km ²) without considering CanVec barriers (Tab. 3)				
Land-cover type	Prairie Ecozone	Alberta	Saskatchewan	Manitoba
Fallow	13,847.558	1,172.163	12,216.203	459.193
Grassland	89,881.299	44,410.608	36,952.295	8,518.396
Hay/Pasture	62,678.213	19,568.146	36,492.404	6,617.663
Shrubland	13,852.565	4,636.424	7,044.421	2,171.720
Wetland	9,947.429	3,432.846	4,233.499	2,281.084
Total suitable area (km ²) after the subtraction of the CanVec barrier areas				
FGs	Prairie Ecozone	Alberta	Saskatchewan	Manitoba
FG1	183,241.176	70,110.733	93,678.580	19,451.863
FG2	169,572.694	68,954.229	81,621.909	18,996.556
FG3	108,372.419	49,890.200	45,990.042	12,492.177
FG4	87,568.592	43,187.443	36,039.198	8,341.951
Amount of suitable area in the Prairie Ecozone (km ²)				
	FG1	FG2	FG3	FG4
Sum	183,241.176	169,572.694	108,372.419	87,568.592
Median patch size	6.21E-03	6.18E-03	6.04E-03	6.26E-03
Min patch size	9.6E-12	9.6E-12	4.5E-12	2.9E-12
Max patch size	1,114.247	1,111.193	981.641	856.933

According to the amended values in Tab. 5, some other values in the abstract and body of the paper also need to be corrected as these numbers are referenced in the text:

In the abstract: The grassland area remaining amounts to 87,568.592 km² in FG4 (strict grassland definition) and 183,241.176 km² in FG1 (broad grassland

definition), out of 461,503.972 km² (entire Prairie Ecozone area).

Page 15: When only considering the AAFC's true grassland class, only 87,568.592 km² of grassland area remain, and FG4 results in a much lower m_{eff} value of 14.23 km², a 44.1 % decrease from FG1.

Page 19, first row of Table 7:

		Total amount of suitable area (km ²)				Effective mesh size: m_{eff} (km ²)			
Name	Area (km ²)	FG1	FG2	FG3	FG4	FG1	FG2	FG3	FG4
Prairie Ecozone	461,503.972	183,241.176	169,572.694	108,372.419	87,568.592	25.443	24.669	18.912	14.233
		Effective mesh density: s_{eff} (meshes per 1,000 km ²)				Fragmentation <i>per se</i> : $m_{\text{eff_per_se}}$ (km ²)			
Name		FG1	FG2	FG3	FG4	FG1	FG2	FG3	FG4
Prairie Ecozone		39.30	40.54	52.88	70.26	64.080	67.138	80.537	75.011

Page 21: For example, the m_{eff} value of the Prairie Ecozone of 14.233 km² in FG4 can be partitioned into the two components:

$$\frac{A_{\text{total_suitable}}}{A_{\text{total_landscape}}} = \frac{87,568.592 \text{ km}^2}{461,503.972 \text{ km}^2} = 18.97\%$$

$$\text{and } m_{\text{eff_per_se}} = \frac{A_{\text{total_landscape}}}{A_{\text{total_suitable}}} \cdot m_{\text{eff}} = \frac{461,503.972 \text{ km}^2}{87,568.592 \text{ km}^2} \cdot 14.233 \text{ km}^2 = 75.01 \text{ km}^2$$

using the values from Table 7. Similarly, the value of $m_{\text{eff}} = 25.443 \text{ km}^2$ in FG1 is the product of the two components:

$$\frac{A_{\text{total_suitable}}}{A_{\text{total_landscape}}} = \frac{183,241.176 \text{ km}^2}{461,503.972 \text{ km}^2} = 39.71\%$$

and $m_{\text{eff_per_se}} = 64.080 \text{ km}^2$, indicating that the degree of fragmentation *per se* of remaining suitable area is actually higher in FG1 than in FG4.

Page 23: The total area of the land-cover type "grassland" in FG4 is 87,568.592 km² out of a possible area of 461,503.972 km², i.e. 18.97 % of the study area. The corresponding percentages are 39.71 % for FG1, 36.74 % for FG2, and 23.48 % for FG3 (Table 7), somewhat similar to estimates given in the literature. The study by the Federal, Provincial and Territorial Governments of

Canada (2010) stated that mixed and fescue grassland cover over 110,000 km². This is well in the range provided by the four FGs from 87,568.592 km² (FG4) to 183,241.176 km² (FG1) of our study.

Gauthier & Wiken (2003) estimated that 25–30 % of the native grasslands remain in the Canadian prairies and parklands. Our value of 87,568.592 km² seen as the 25–30 % estimate of remaining grasslands would imply an original total area between 291,895.306 km² and 350,274.368 km² for FG4 and between 610,803.920 km² and 732,964.704 km² for FG1, meaning that 63.24 % - 100 % of the Prairie Ecozone was once covered by grasslands.

In addition to these value changes, on page 5 the name of a species was misspelt ("Sprague's Pipet"), which should read Sprague's Pipit.

Page 25: We would also like to use this opportunity to clarify the role of the Conservation Areas Reporting And Tracking System (CARTS). The CARTS itself does not protect any areas, but is merely a compilation of protected areas as recognized by appropriate jurisdictions and therefore, strictly speaking, there are no "CARTS regions". It is more appropriate to refer to these "CARTS regions" simply as protected areas (which have been classified by various IUCN protected areas categories) that have been compiled in this CARTS database.

We apologize for any inconvenience that our mistakes in the original version may have caused.