

CORRECTION

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Correction to: Classes of tree-based networks



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Following publication of the original article [1], in the description of the leaf shrinking procedure as well as in Algorithm 1 and the definition of edge-based graphs in [1], the condition that G contains at least two leaves (i.e., the condition $|V_L(G)| \geq 2$) needs to be omitted. Moreover, in line 2 of Algorithm 1 it should read $|V(\mathcal{LS}(G))| > 2$.

In particular, Algorithm 1 and Definition 3 should read as follows:

Algorithm 1: Leaf shrinking

Input: Connected graph G (e.g., a phylogenetic network N^u) with $|V(G)| \geq 2$.

Output: Leaf shrink graph $\mathcal{LS}(G)$ of G .

```
1:  $\mathcal{LS}(G) := G$ ;  
2: while  $|V(\mathcal{LS}(G))| > 2$  do  
3:   Do one of the following (if applicable):  
   • Delete leaf  $x$  (and its incident edge) from  $\mathcal{LS}(G)$ .  
   • Suppress a vertex of degree 2 in  $\mathcal{LS}(G)$ .  
   • Delete one copy of a multiple edge, i.e., if  $e' = e \in E(\mathcal{LS}(G))$ , delete  $e$ .  
   • Delete a loop, i.e., if  $e = \{u, u\} \in E(\mathcal{LS}(G))$ , delete  $e$ .  
   If no operation is applicable, return  $\mathcal{LS}(G)$ .  
4: end while  
5: if  $|V(\mathcal{LS}(G))| = 2$  then  
6:   while  $|E(\mathcal{LS}(G))| > 1$  do  
7:     if  $\mathcal{LS}(G)$  contains a multiple edge  
       (i.e., if  $e' = e \in E(\mathcal{LS}(G))$ ) or if  $\mathcal{LS}(G)$  contains a  
       loop (i.e., if  $e = \{u, u\} \in E(\mathcal{LS}(G))$ ),  
8:       then  
9:         Delete  $e$ .  
10:      end if  
11:   end while  
12: return  $\mathcal{LS}(G)$ .
```

Definition 3 Let G be a connected graph with $|V(G)| \geq 2$. If the leaf shrink graph $\mathcal{LS}(G)$ of G is a single edge, G is called *edge-based*. Else, G is called *non-edge-based*. If $G = N^u$ is a proper phylogenetic network with $|V(N^u)| \geq 2$ and $|X| \geq 2$ and $\mathcal{LS}(N^u)$ is a single edge, we call N^u an *edge-based network*. Else, N^u is called *non-edge-based*.

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Reference

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