

Figure S10

**Figure S10.** Published admixture graph from Lipson *et al.* (2020) and alternative graphs found with *findGraphs* (12 populations, 11 admixture events) using the updated algorithm for calculating  $f$ -statistics. The graphs were also re-fitted using the original algorithm for calculating  $f$ -statistics. Model parameters (graph edges) that were inferred to be unidentifiable are plotted in red.

**a, published model**

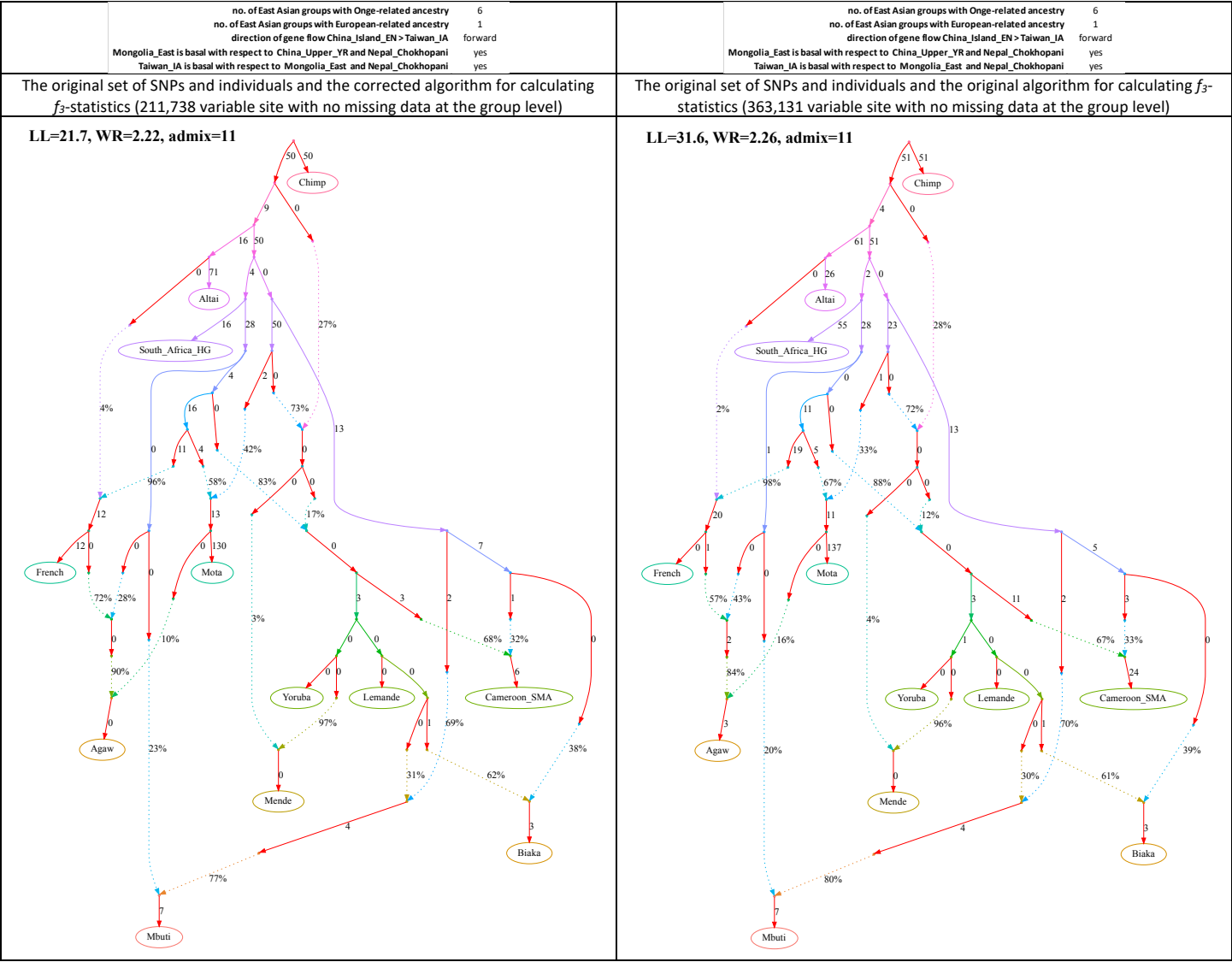
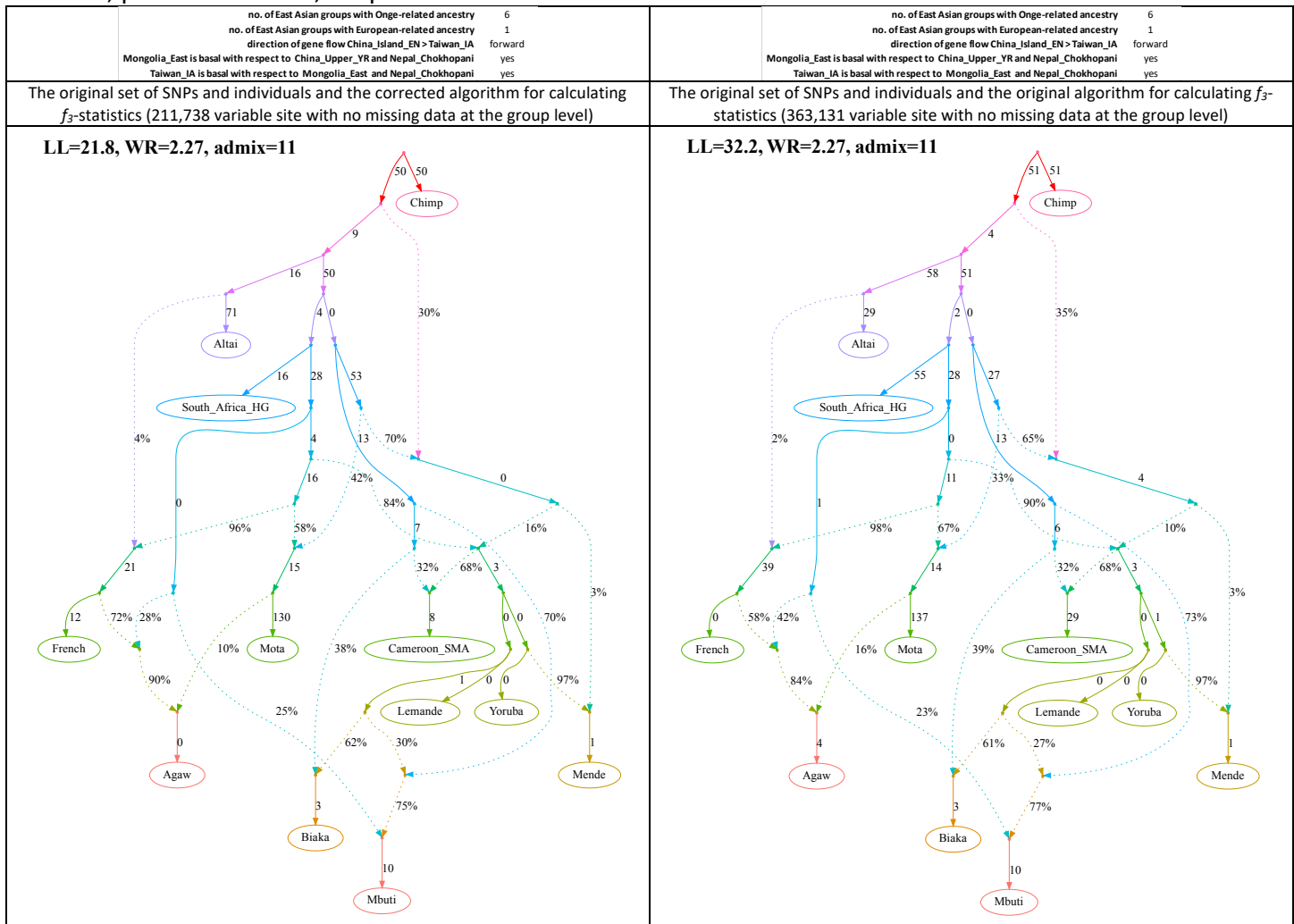


Figure S10

**b, published model, simplified**

Selected claims by Lipson et al. 2020 relying on the admixture graph:

- 1) A lineage maximized in present-day West African groups (Lemande, Mende, and Yoruba) also contributed some ancestry to the ancient Shum Laka individual, and present-day Biaka and Mbuti;
- 2) another ancestry component in Shum Laka is a deep-branching lineage maximized in rainforest hunter-gatherers Biaka and Mbuti;
- 3) “super-archaic” ancestry (i.e., diverging at the modern human/Neanderthal split point or deeper) contributed to Biaka, Shum Laka, Mbuti, Lemande, Mende, and Yoruba;
- 4) a ghost modern human lineage (or lineages) contributed to Agaw, Mota, Biaka, Shum Laka, Mbuti, Lemande, Mende, and Yoruba.

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c, selected alternative models fitting nominally better than the published one

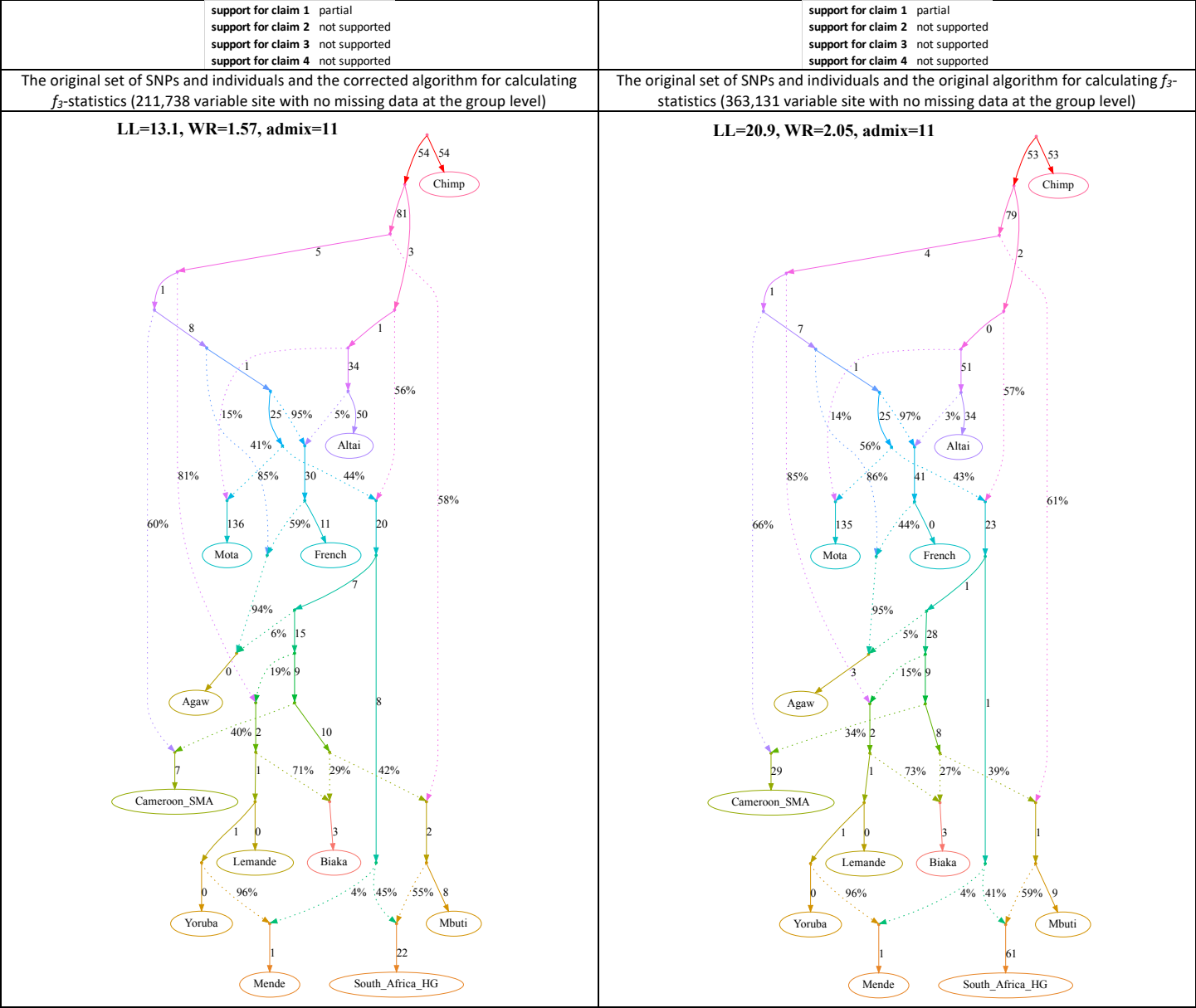


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**d**, selected alternative models fitting nominally better than the published one



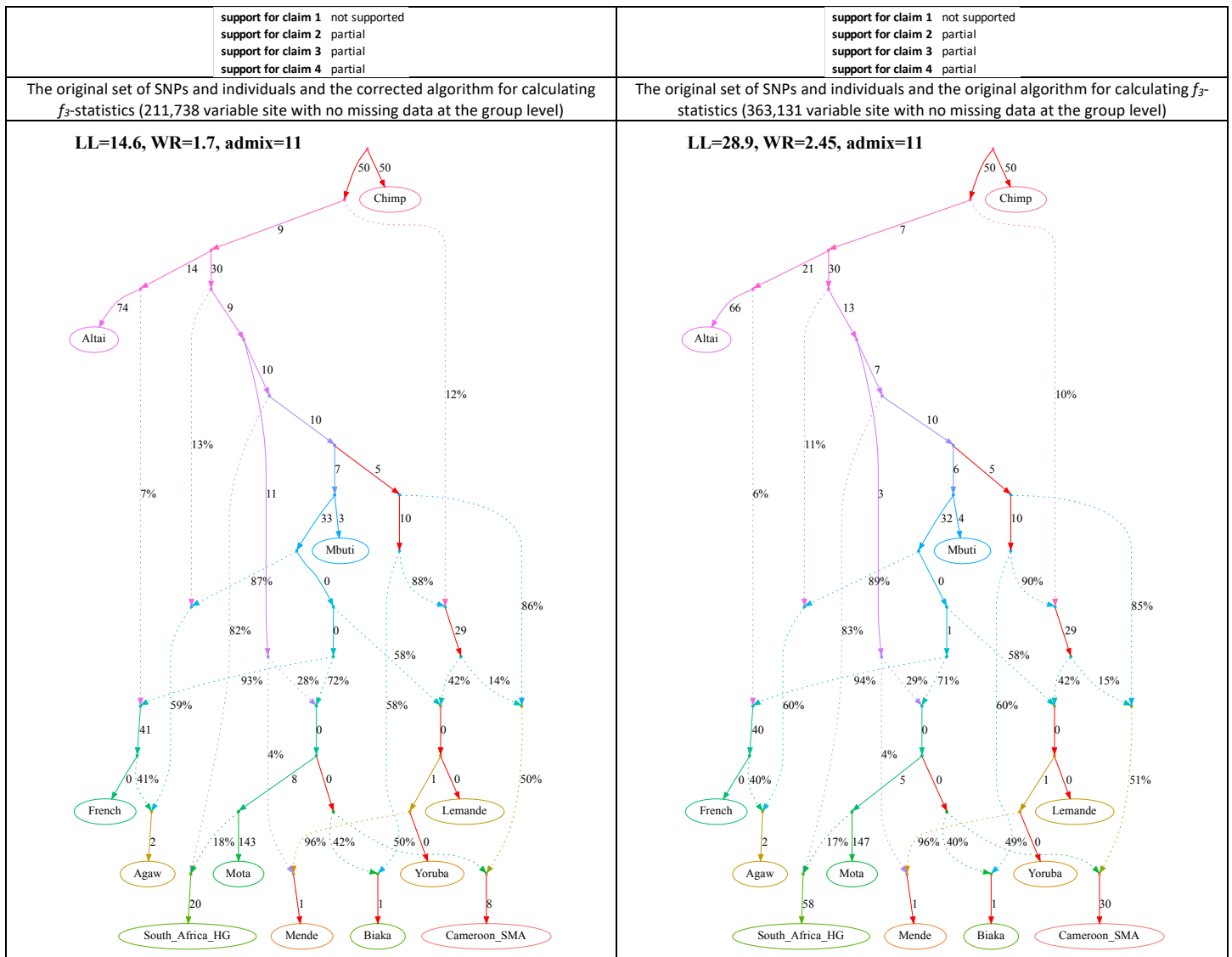
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**e**, selected alternative models fitting nominally better than the published one



Figure S10

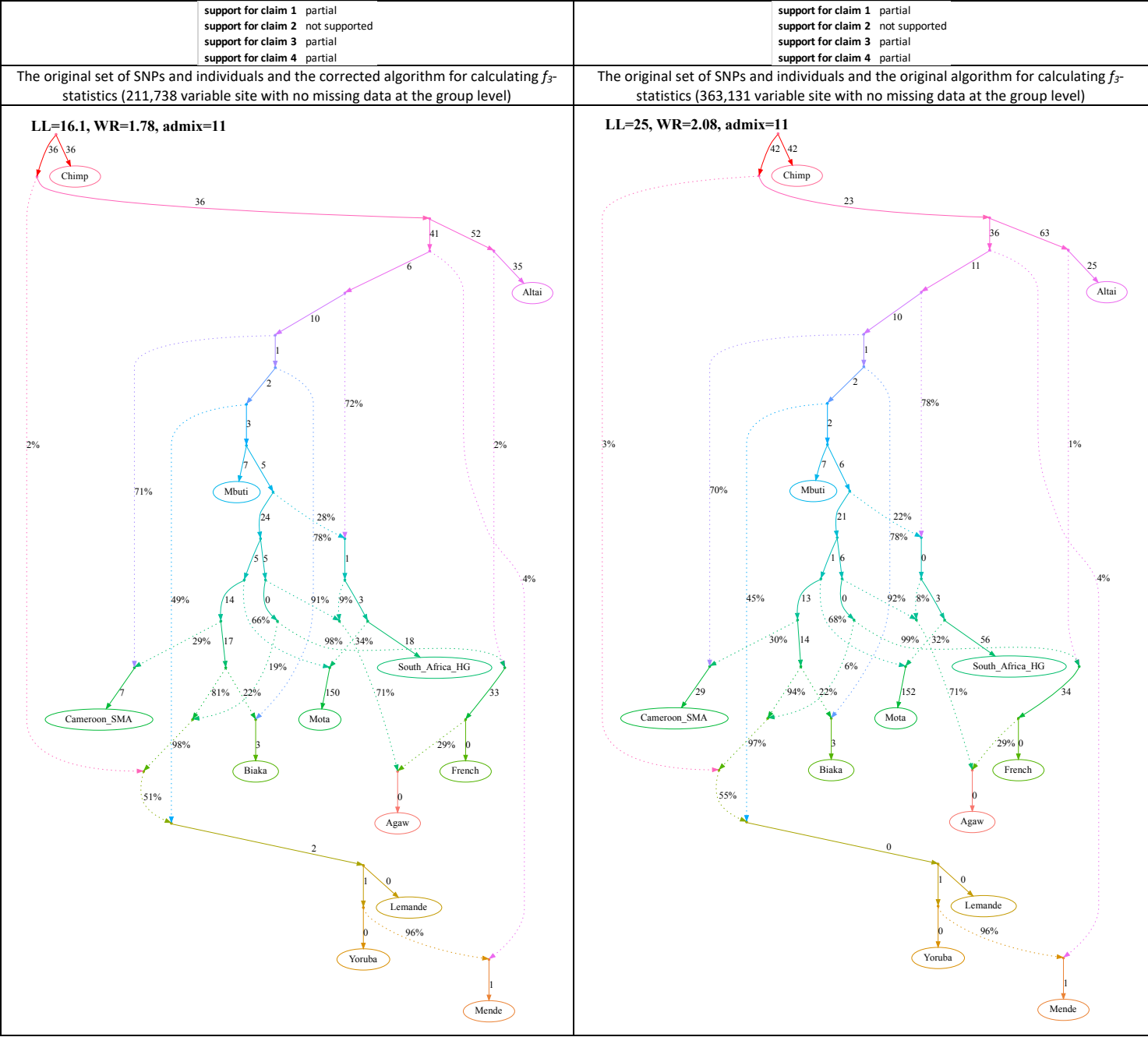




**f**, selected alternative models fitting nominally better than the published one



Figure S10



**g**, selected alternative models fitting nominally better than the published one



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Figure S10

**h**, selected alternative models fitting nominally better than the published one

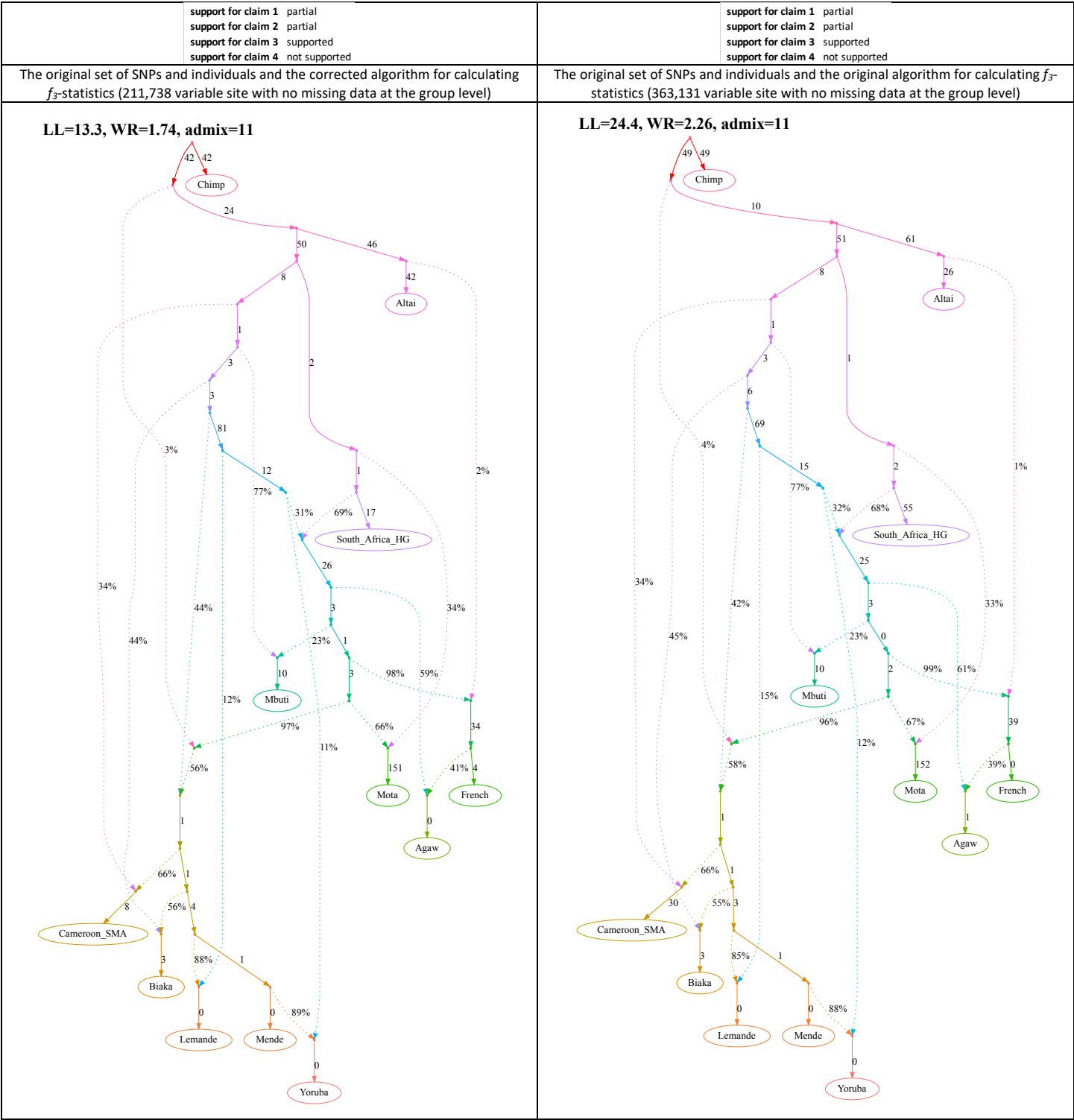


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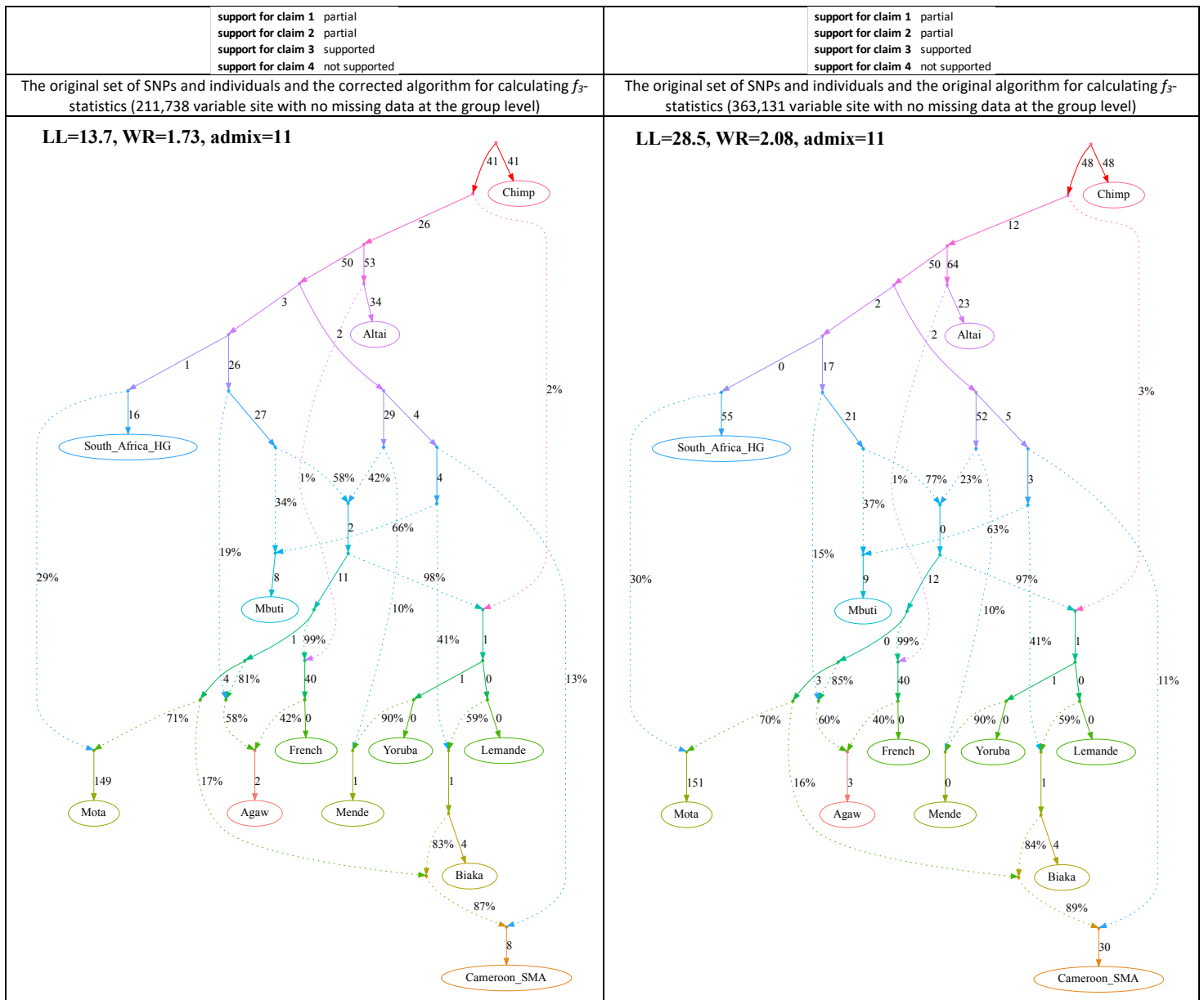


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i, selected alternative models fitting nominally better than the published one

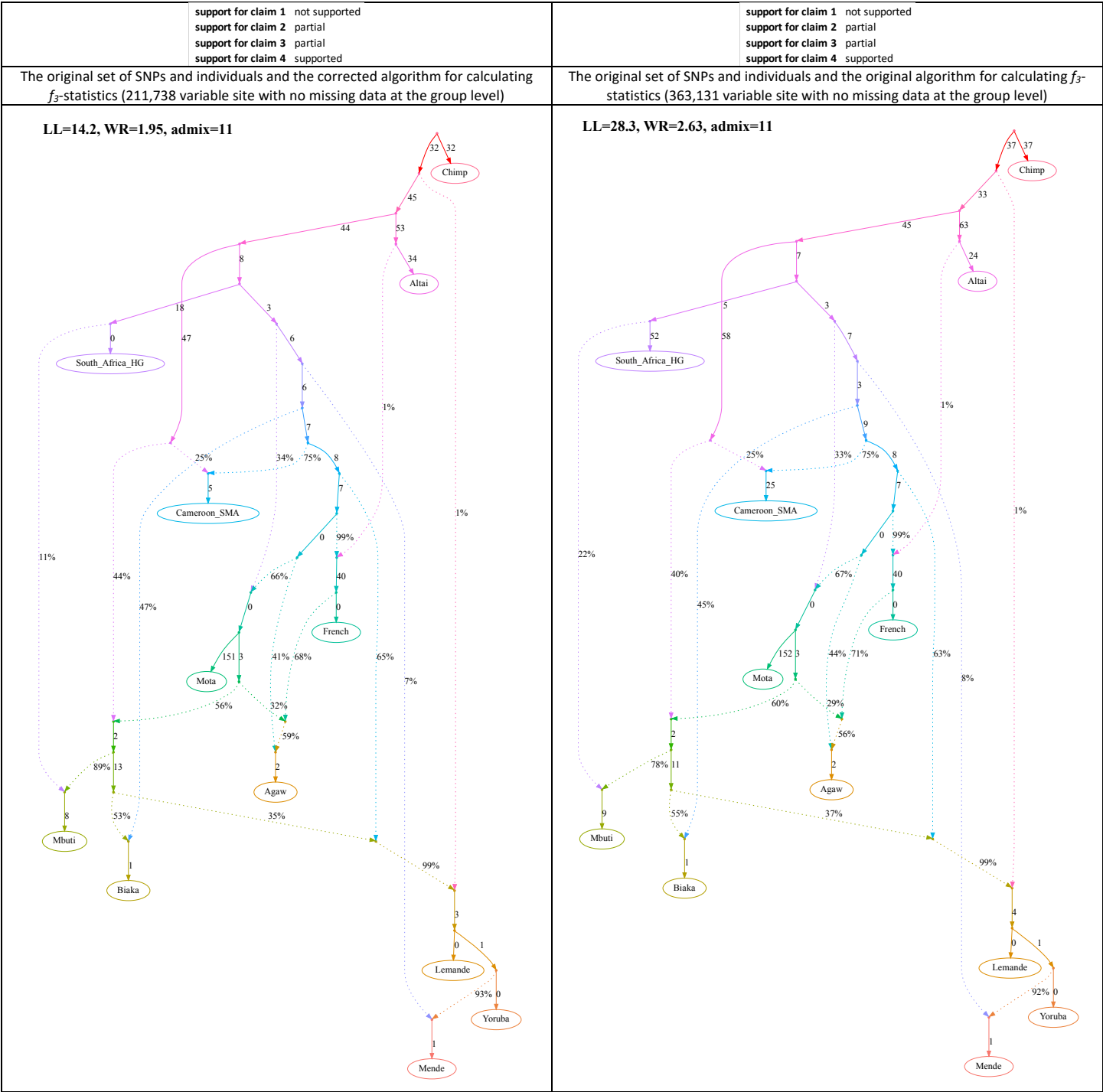
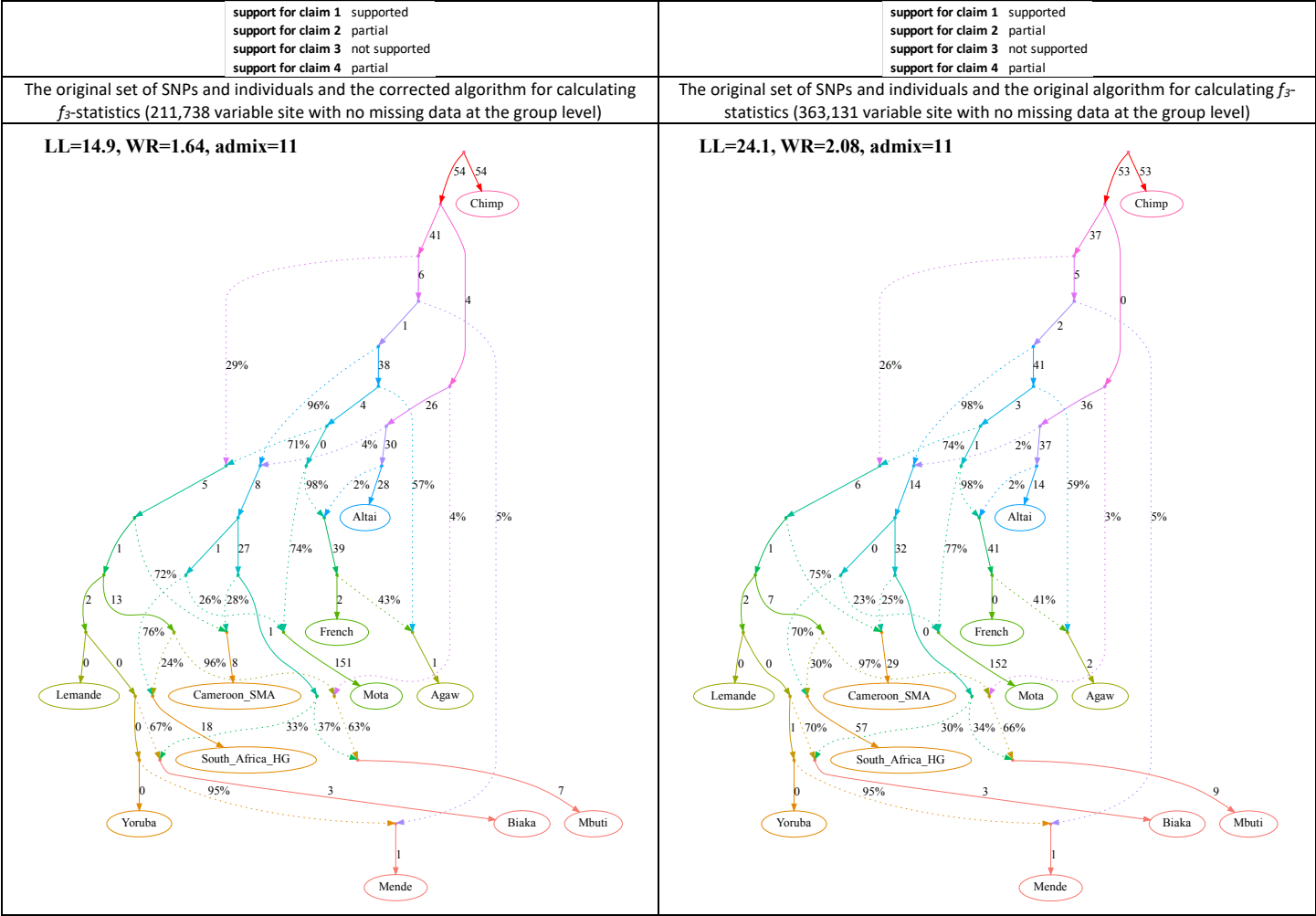


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j, selected alternative models fitting nominally better than the published one



Figure S10

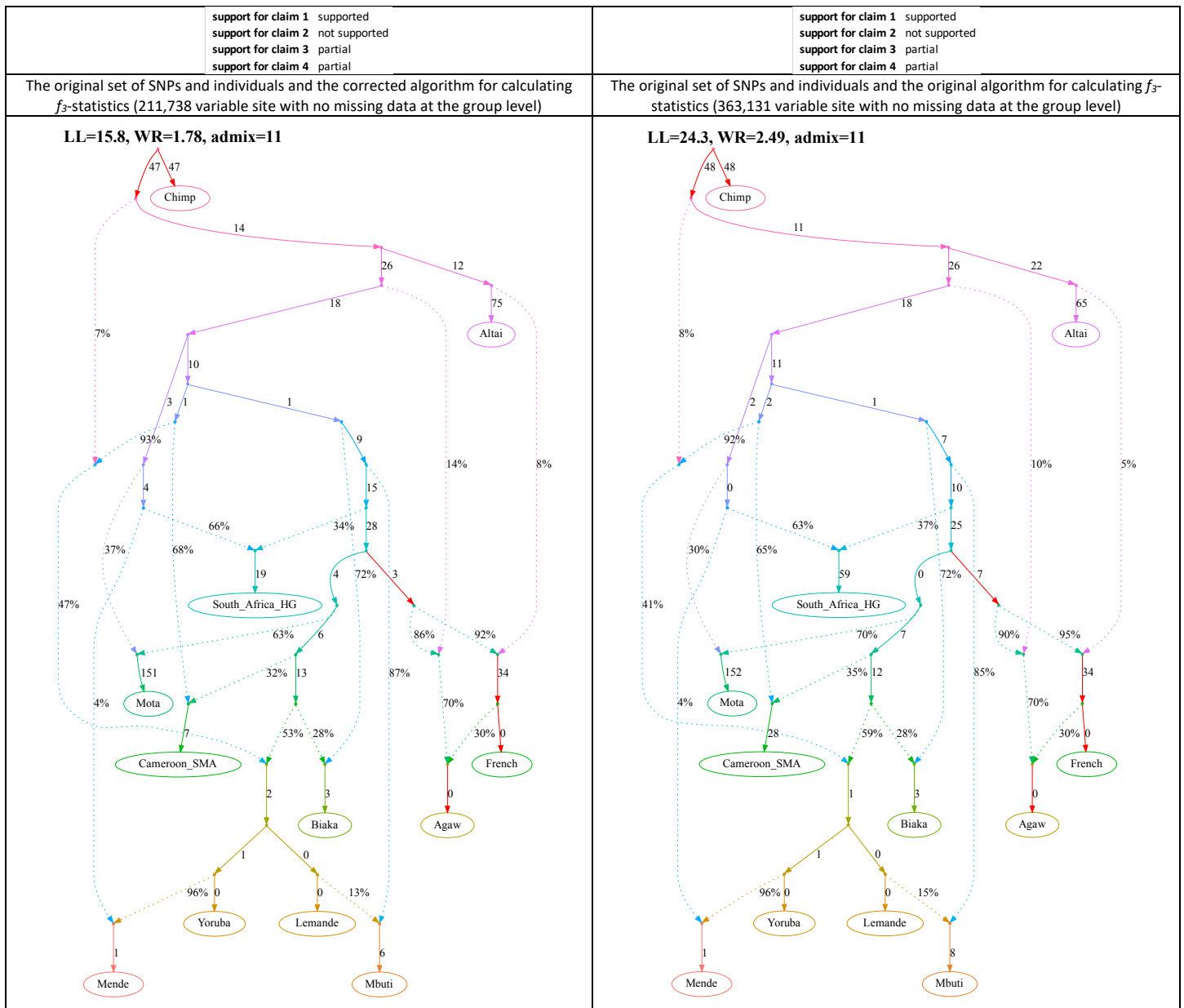


Figure S10

k, selected alternative models fitting nominally better than the published one

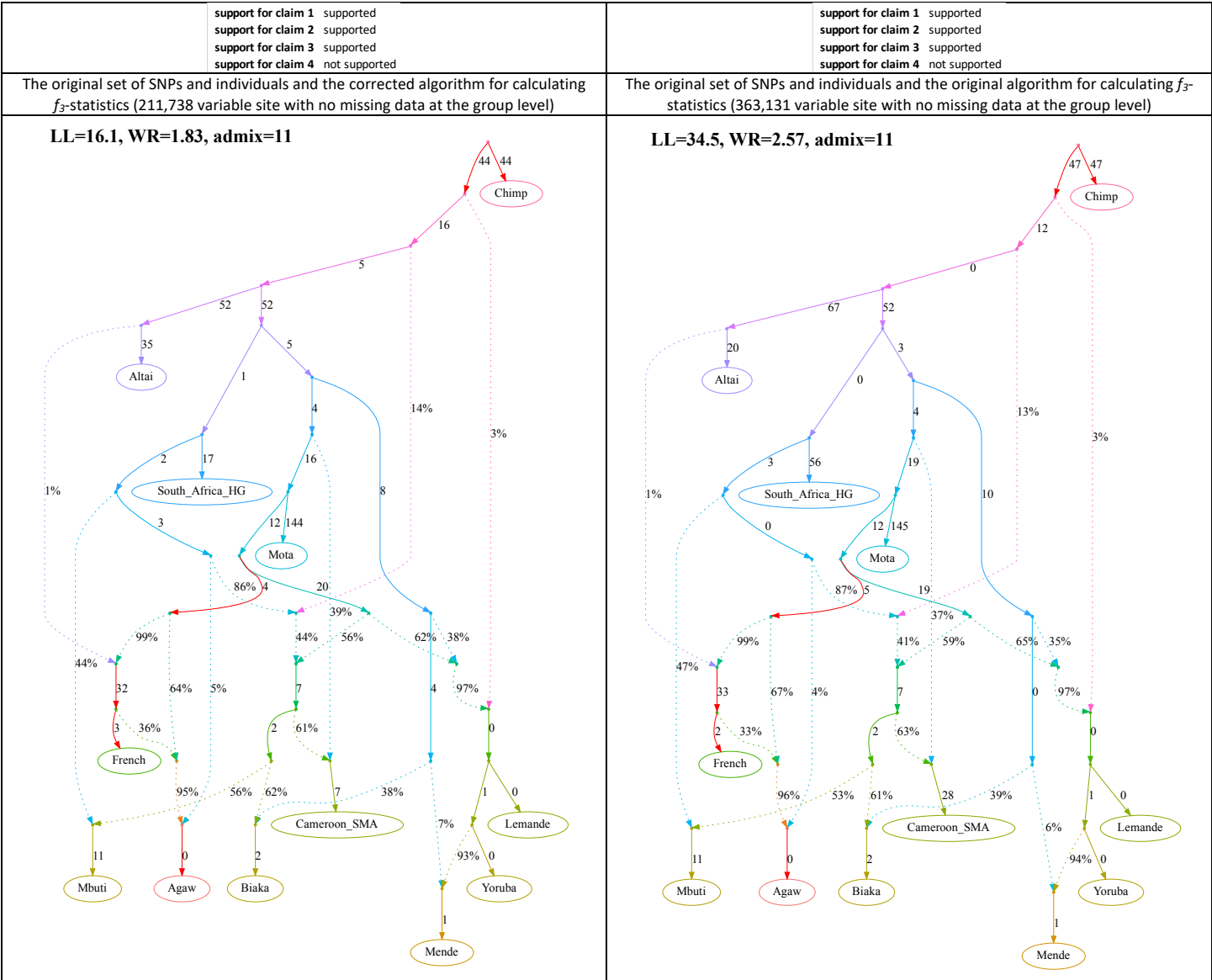
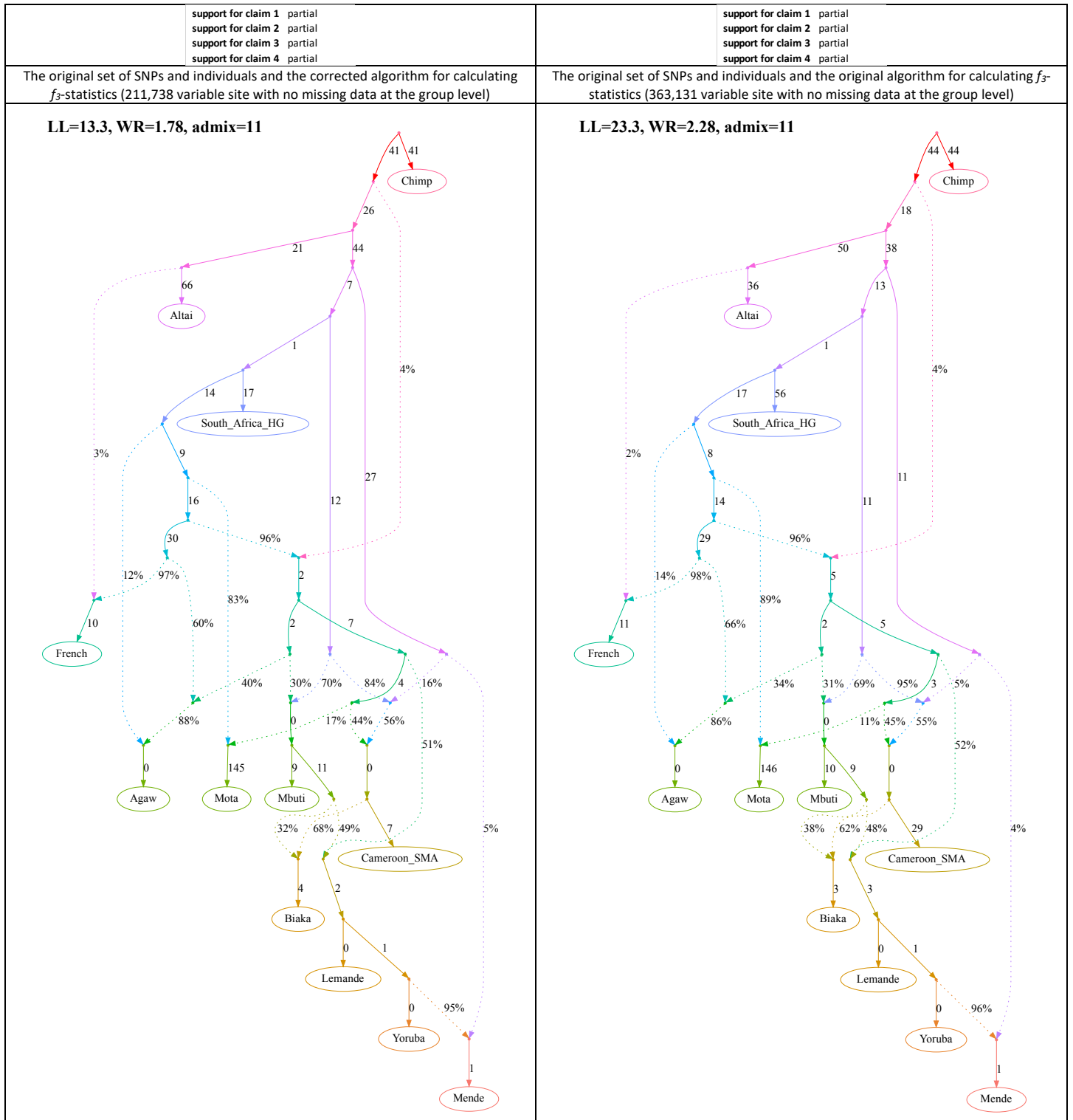


Figure S10



I, selected alternative models fitting nominally better than the published one



Figure S10

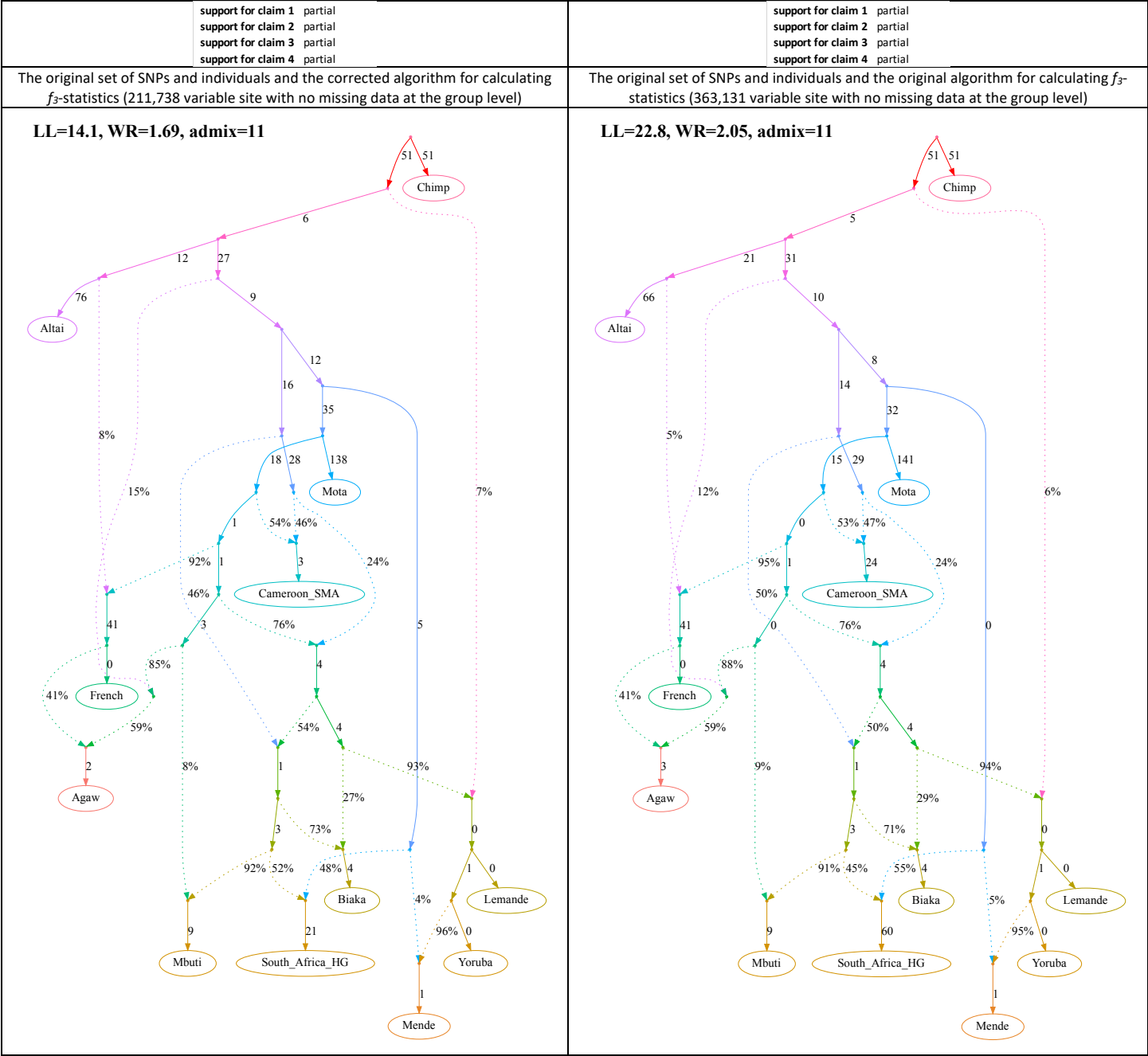


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**m**, selected alternative models fitting nominally better than the published one

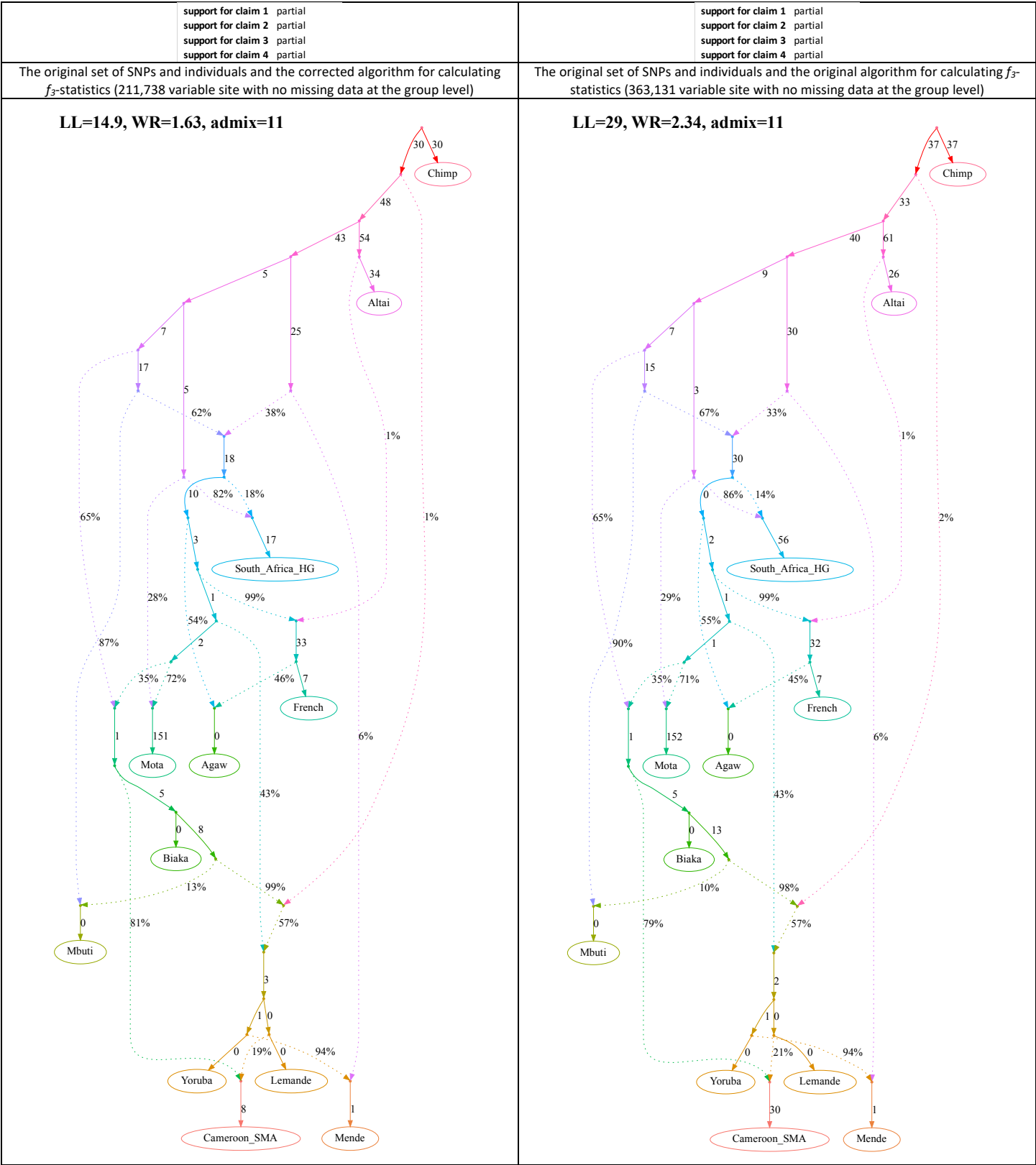


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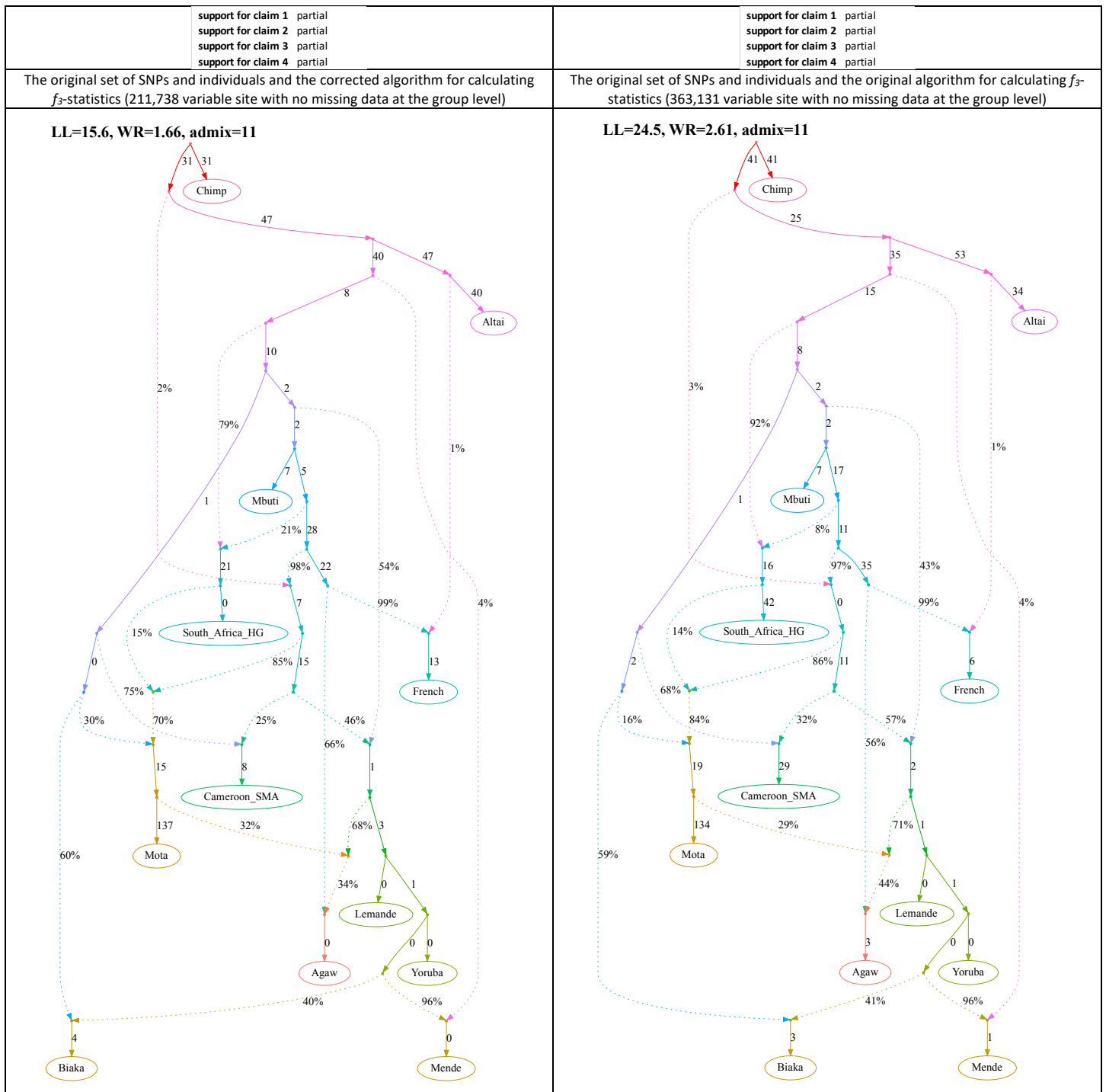




Figure S10

n, selected alternative models fitting nominally better than the published one

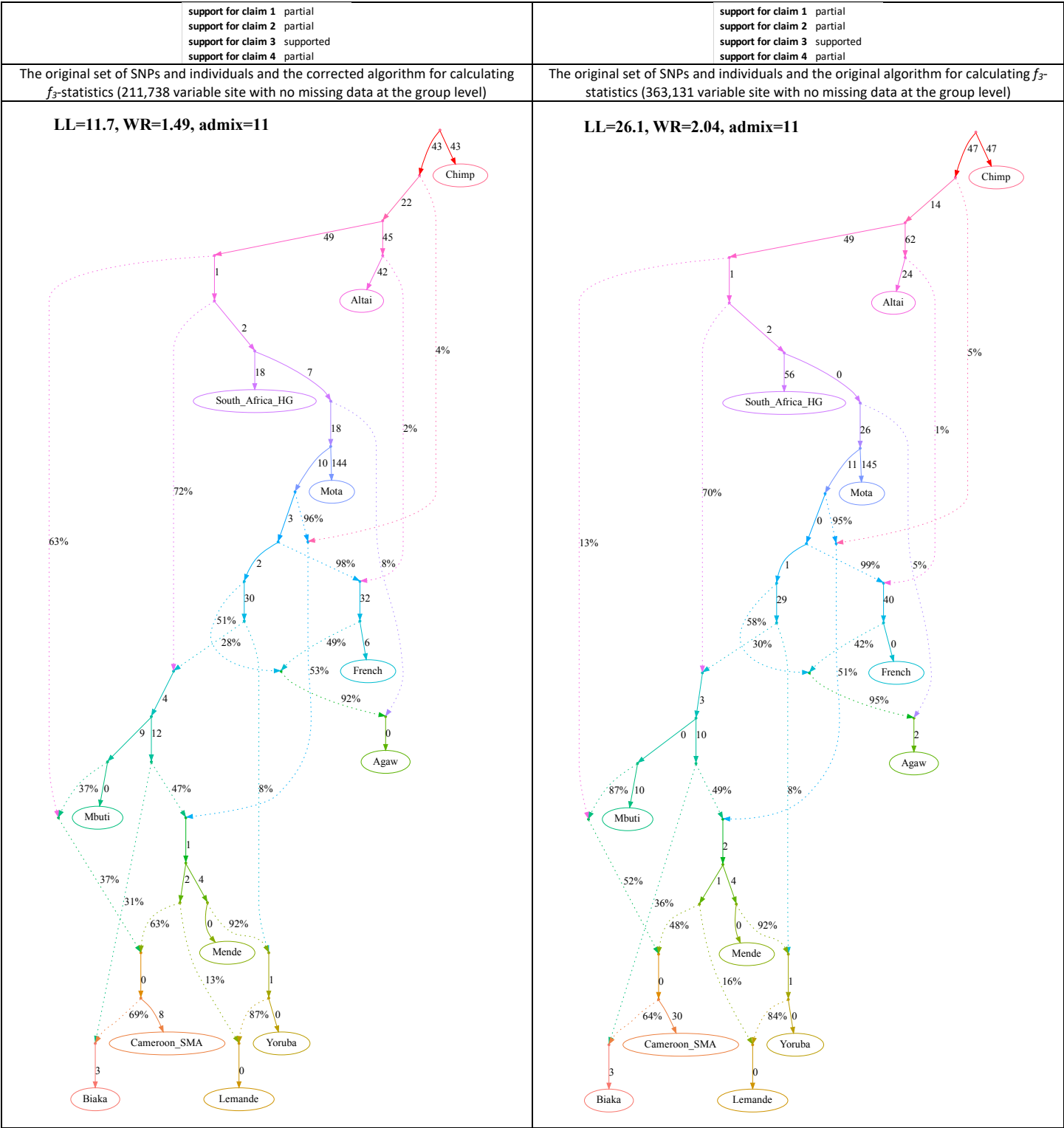
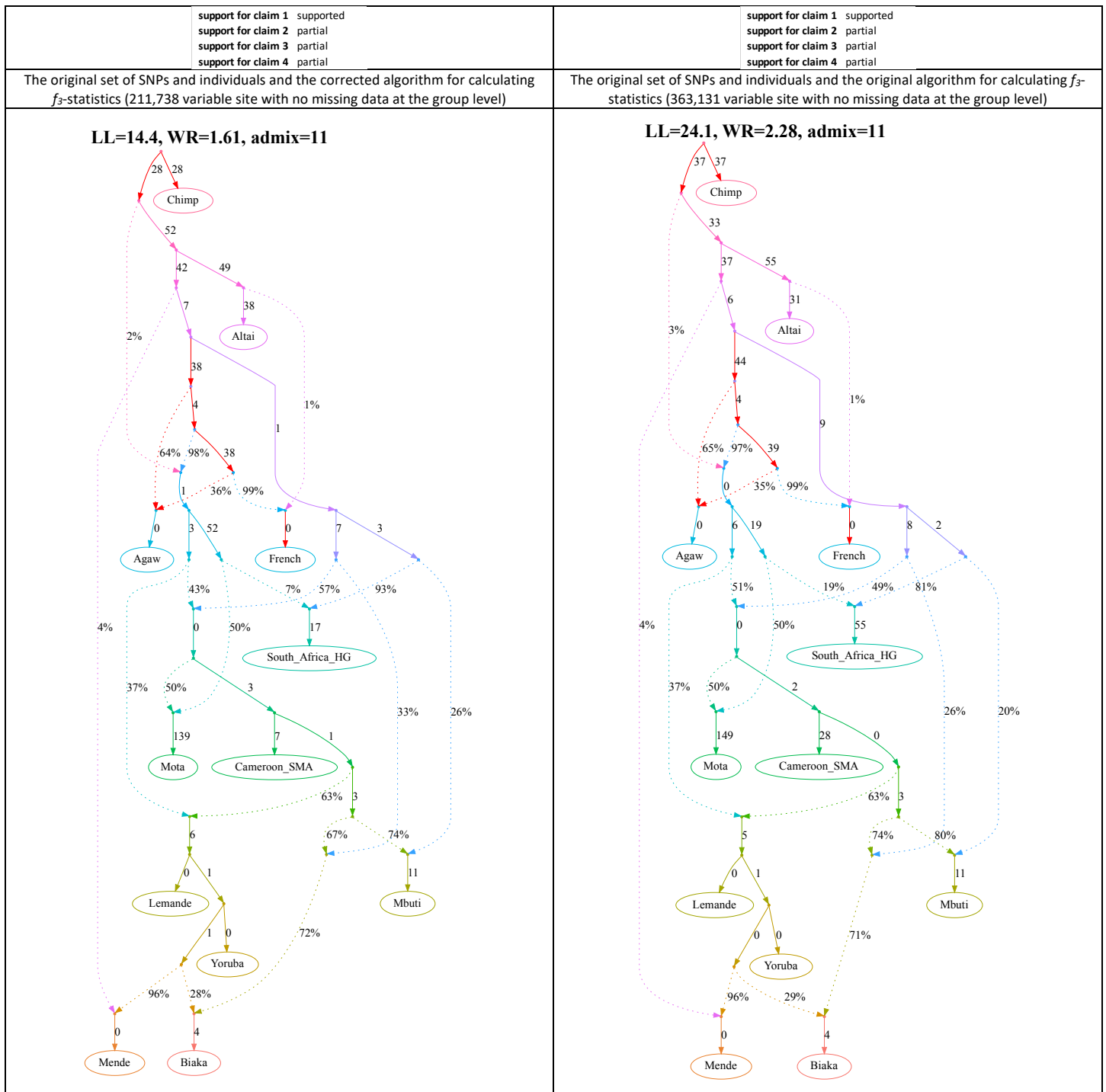


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**o**, selected alternative models fitting nominally better than the published one



Figure S10

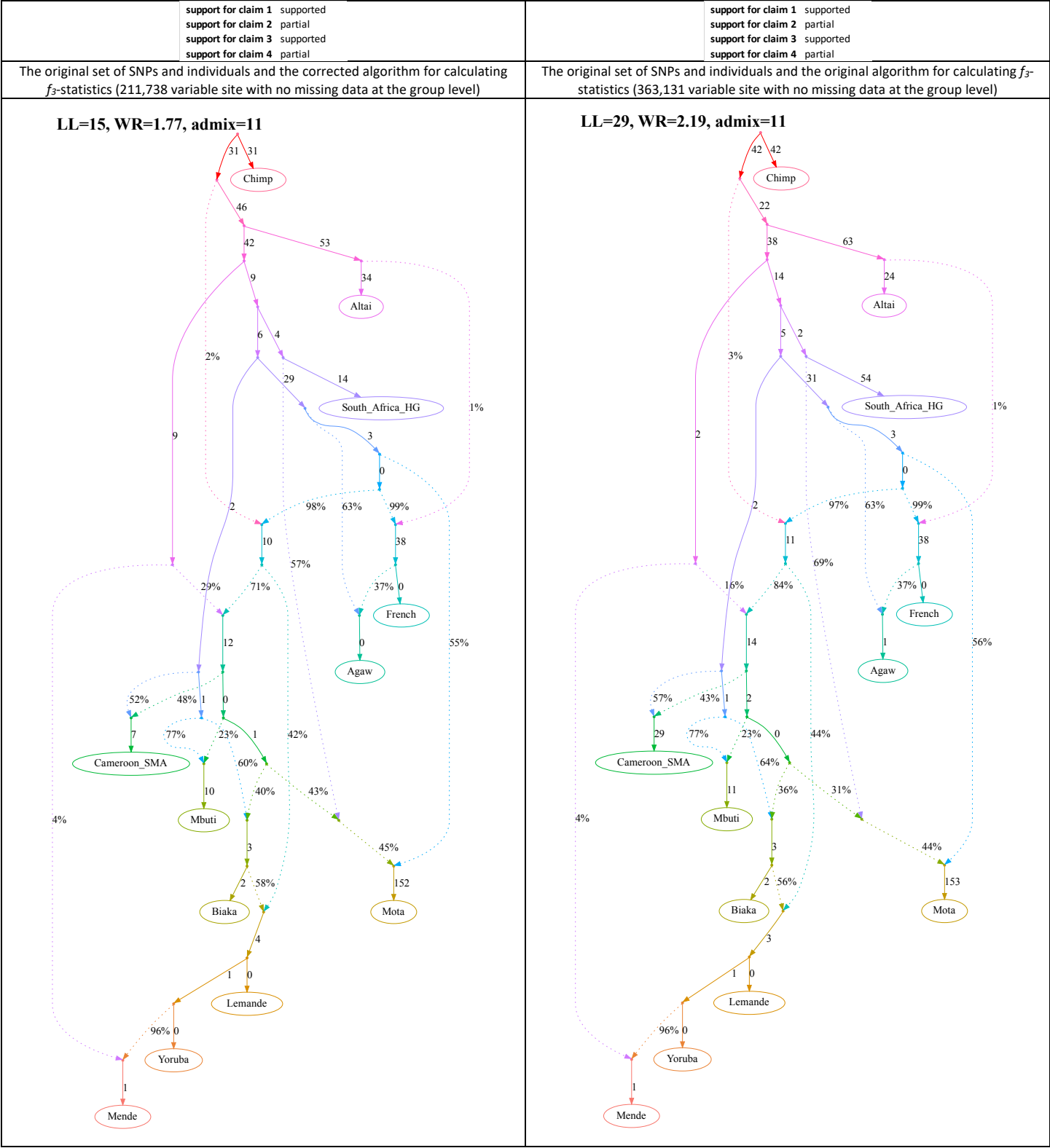


Figure S10

**p**, selected alternative models fitting nominally better than the published one

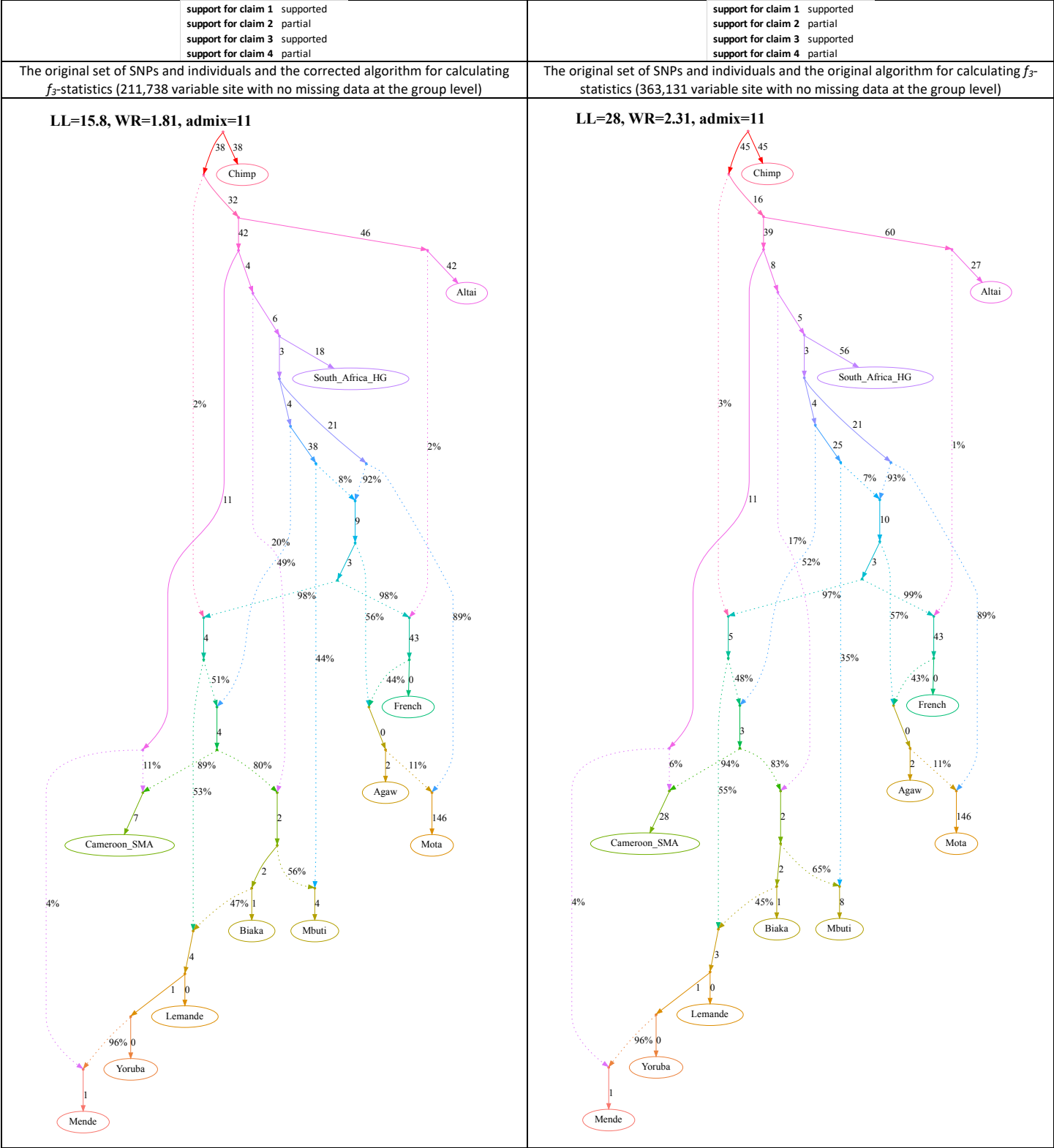
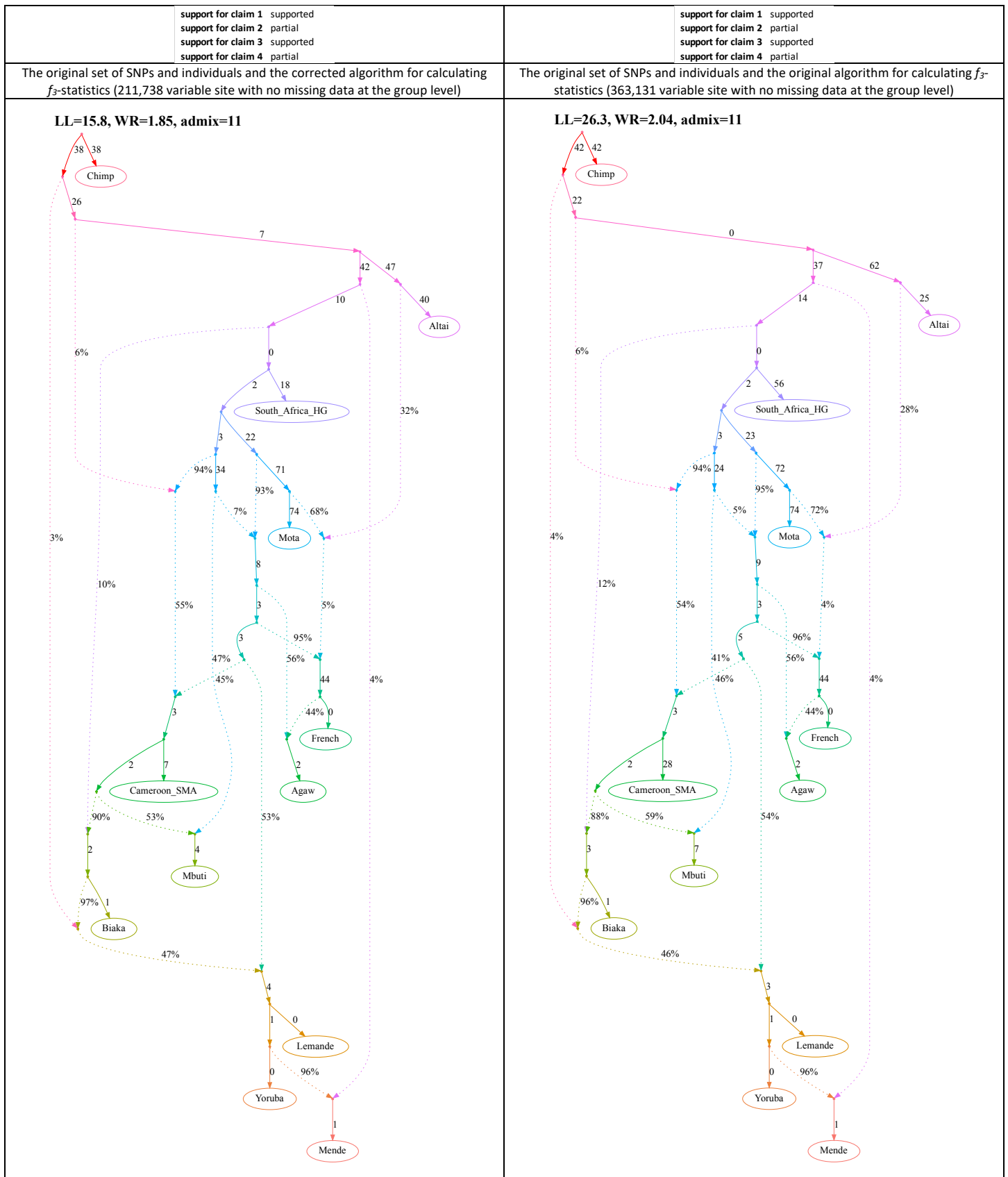


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**q**, selected alternative models fitting nominally better than the published one



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