

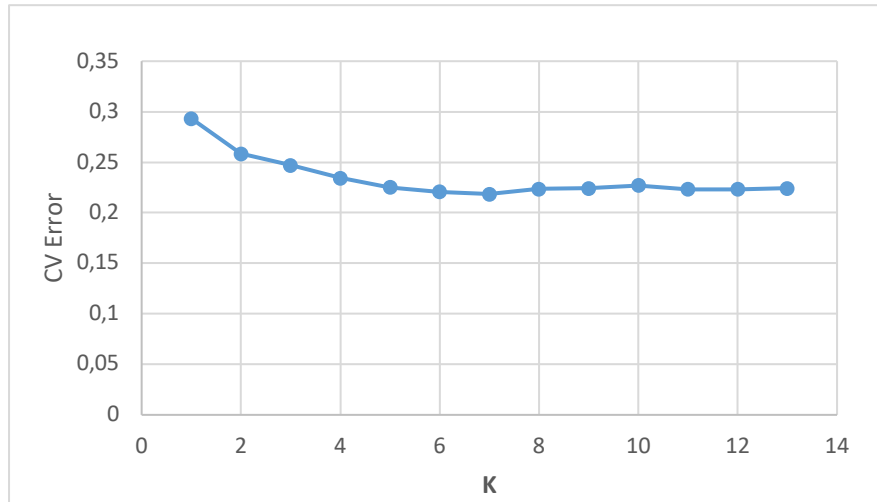


Figure S1. Cross-validation error curve for different K from 2 to 13 in population assignment analysis.

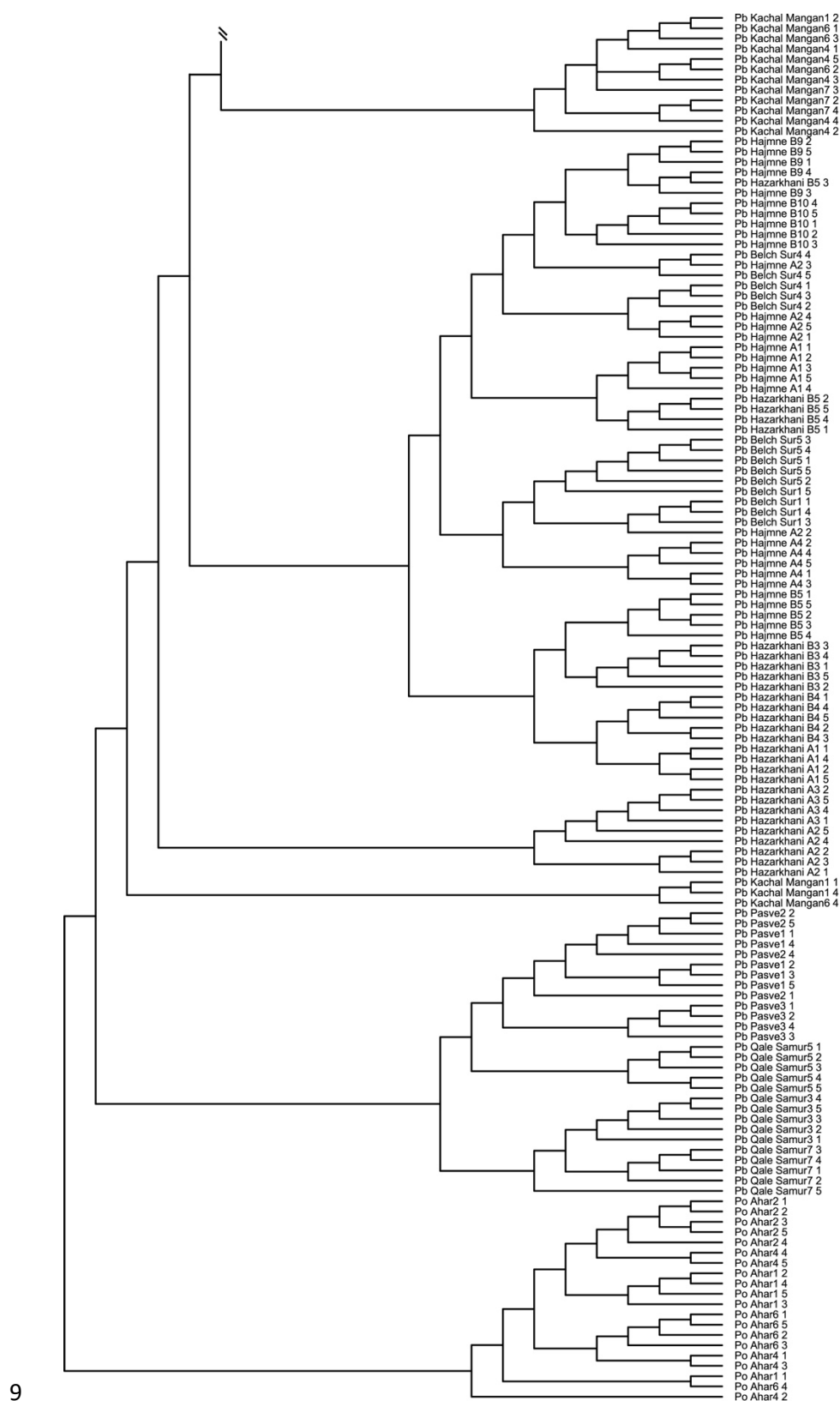


Figure S2. Strict consensus derived from 80 MP trees resulting from the parsimony analysis of the GBS dataset, including 264 individuals of *P. orientale* (Po; outgroup) and *P. bracteatum* (Pb).

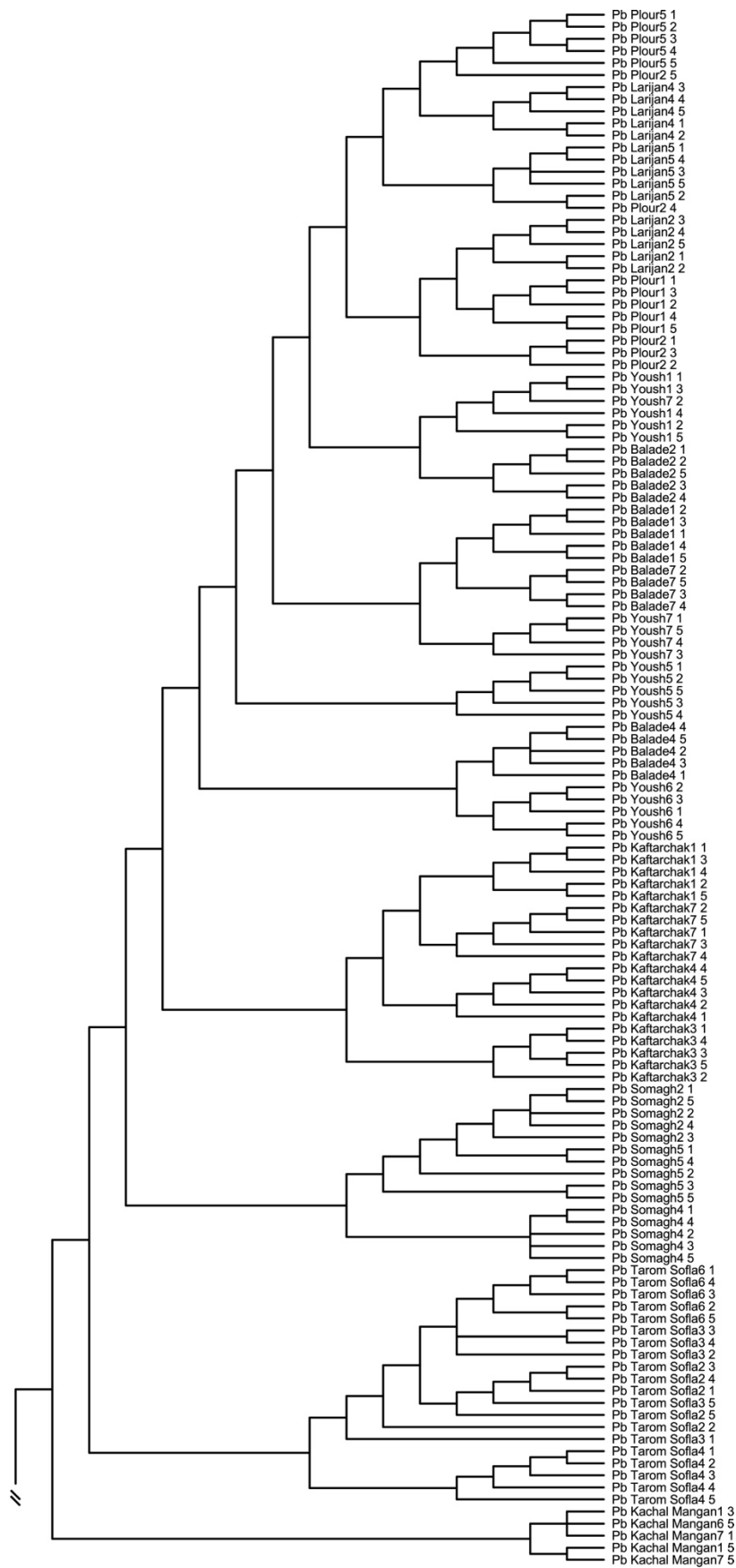


Figure S2. Continued

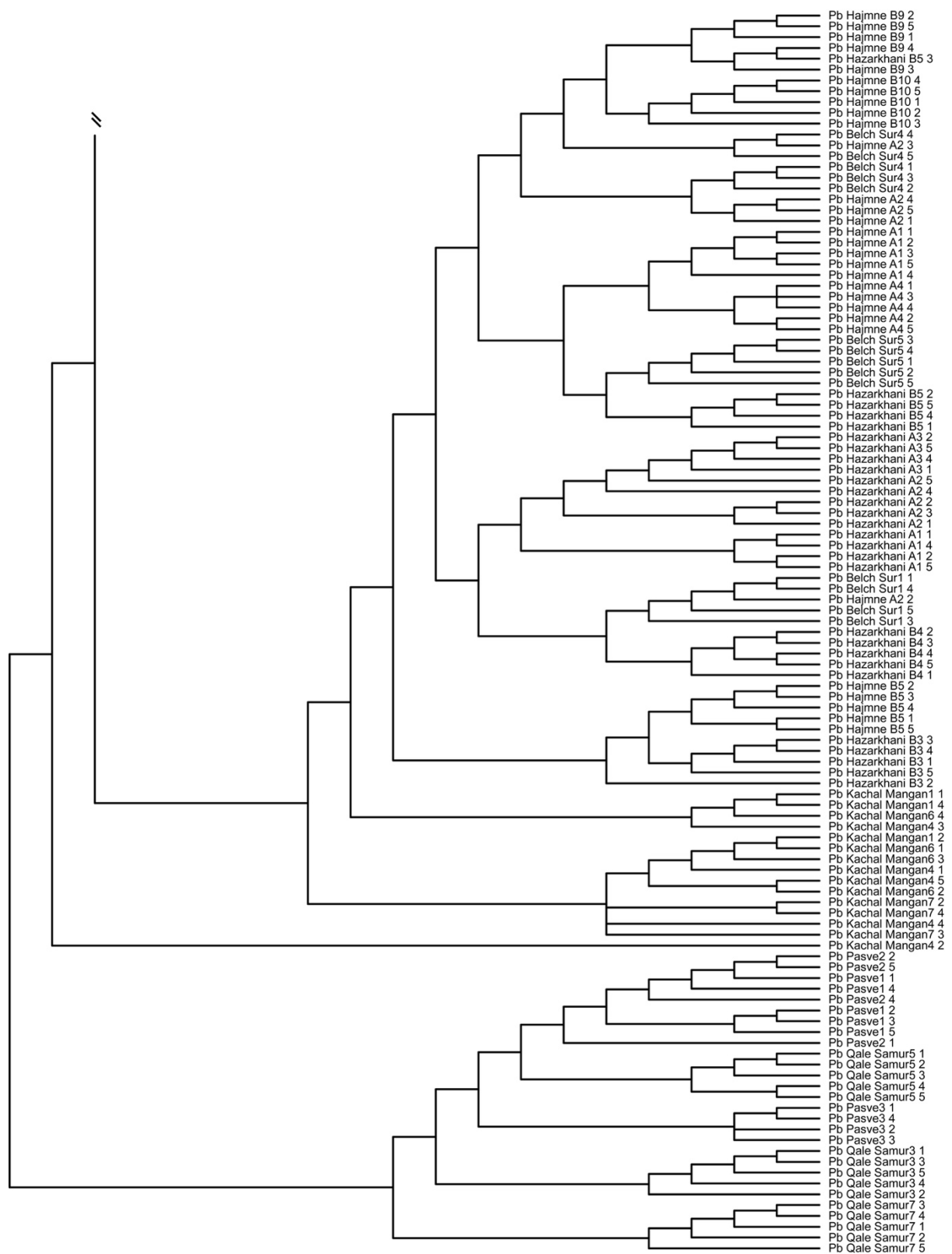


Figure S3. Strict consensus derived from 120 MP trees resulting from the parsimony analysis of the GBS dataset, including 244 *P. bracteatum* individuals.

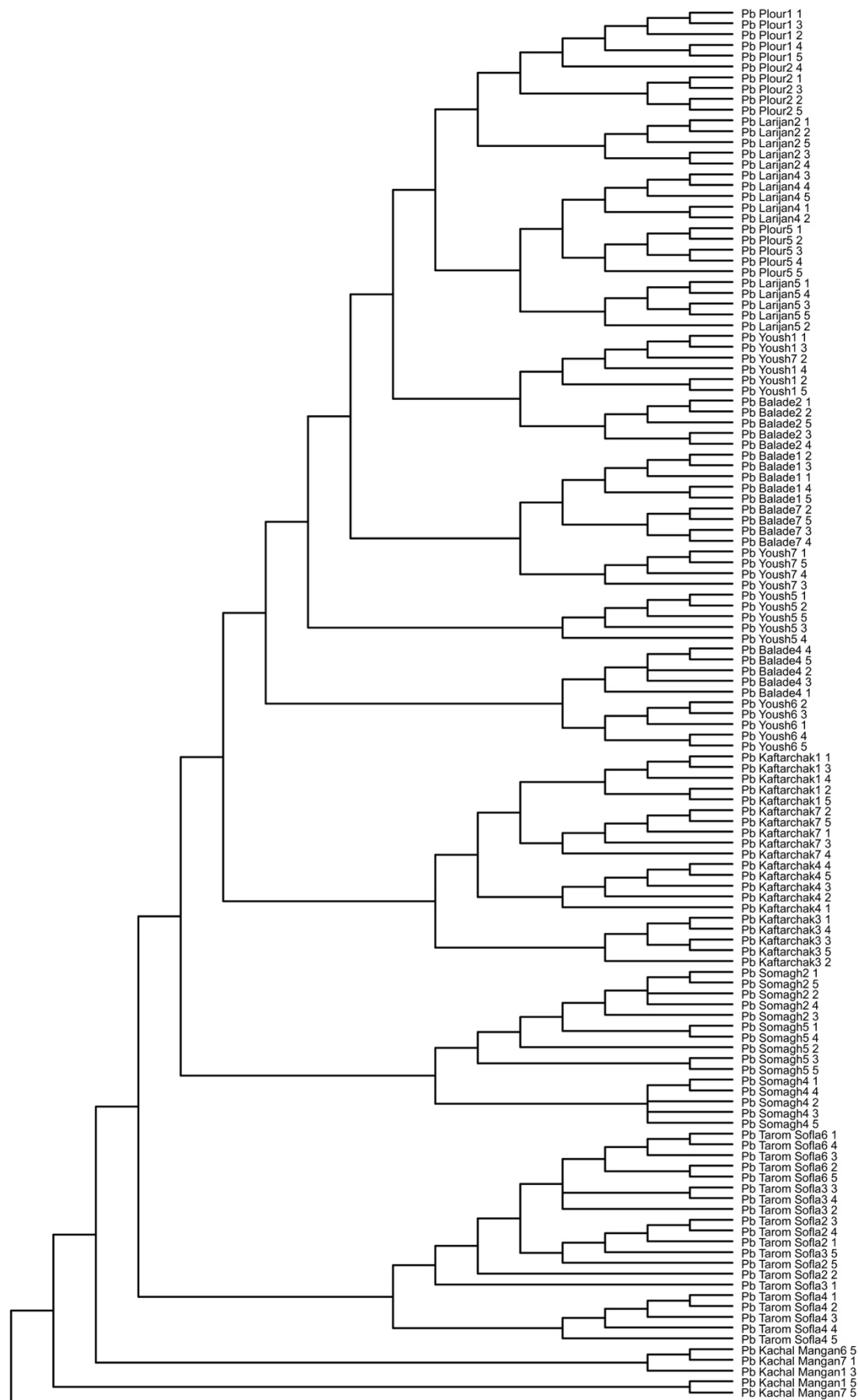


Figure S3. Continued

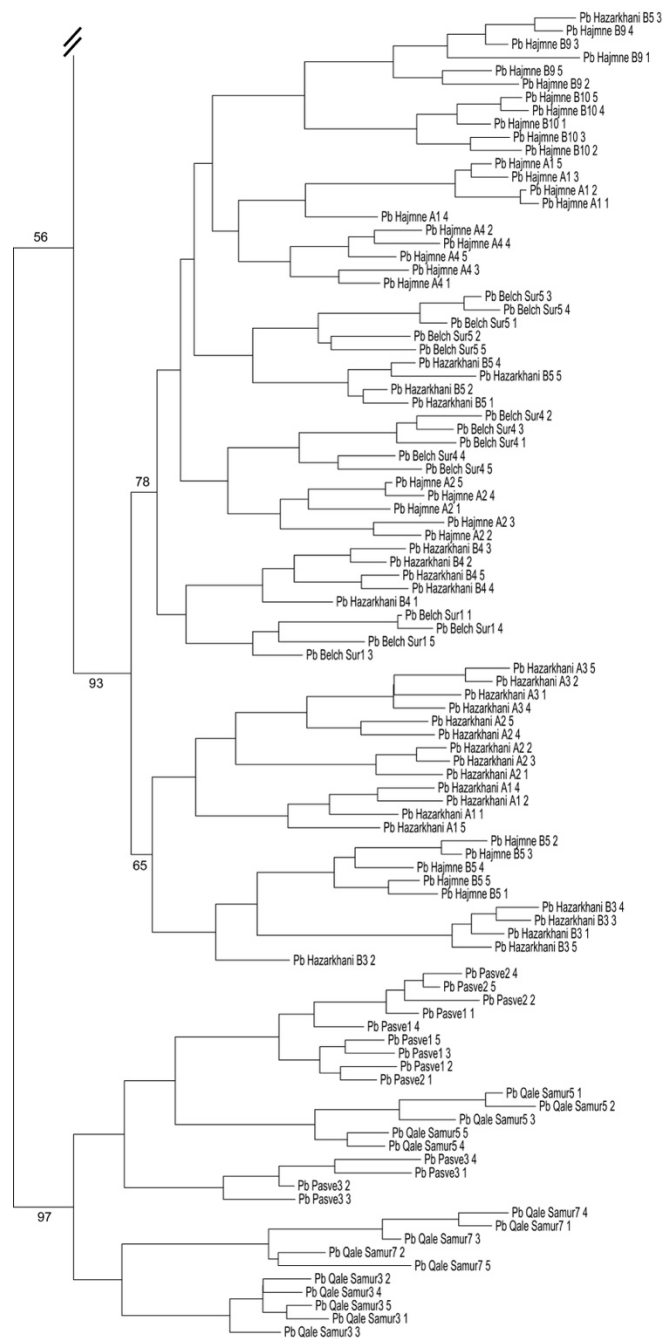


Figure S4. Maximum-likelihood tree for the GBS dataset excluding *P. orientale*. Numbers along branches on the backbone of the tree depict bootstrap support values (≥50%).

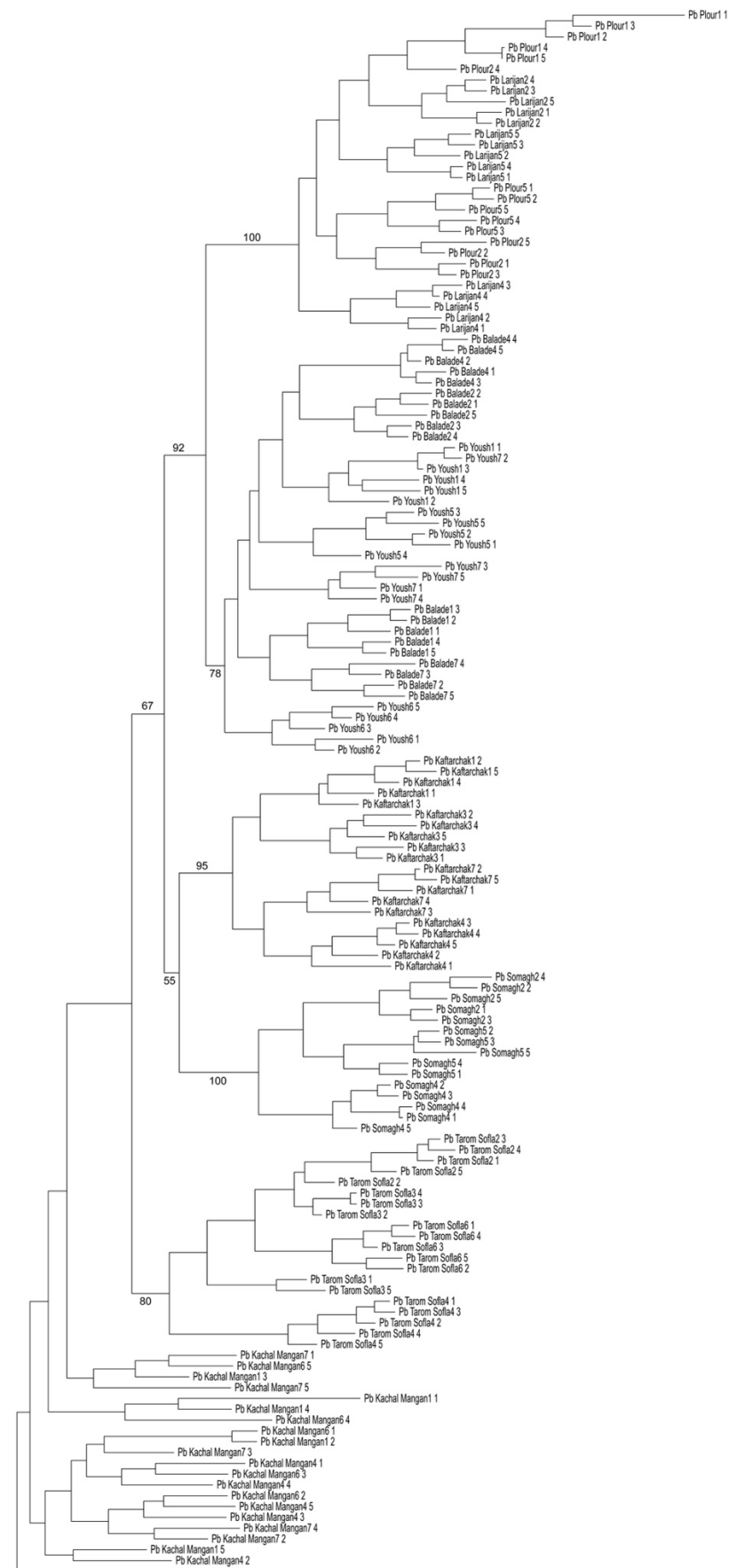


Figure S4. Continued

24 Table S1: Populations included in the analyses

Species	Population	Origin	Abbreviation	Collection number	No. of Individuals
<i>Papaver orientale</i>	Ahar	Iran, Province East Azerbaijan, close to Ahar	Ahar	AGh-08	20
<i>Papaver bracteatum</i>	Balade	Iran, Province Mazandaran, around Balade, Alborz Mts.	Bal	AGh-07	19
<i>Papaver bracteatum</i>	Belch Sur	Iran, Province Kurdistan, near Belch Sur, Zagros Mts.	BSr	AR-09	14
<i>Papaver bracteatum</i>	Hajmne	Iran, Province Kurdistan, near Hajmne, Zagros Mts.	Hjm	AR-08	30
<i>Papaver bracteatum</i>	Hazarkhani	Iran, Province Kurdistan, near Hazarkhani, Zagros Mts.	Hkn	AR-10	28
<i>Papaver bracteatum</i>	Kachal Mangan	Iran, Province Kurdistan, near kachal Mangan, Zagros Mts.	KMn	AR-12	20
<i>Papaver bracteatum</i>	Kaftarchak	Iran, Province Gilan, near Kaftarchak, west of Alborz Mts.	Kch	AGh-06	20
<i>Papaver bracteatum</i>	Larijan	Iran, Province Mazandaran, near Larijan, central Alborz Mts.	Ljn	AGh-03	15
<i>Papaver bracteatum</i>	Pasve	Iran, Province west Azerbaijan, near Pasve, Zagros Mts.	Psv	AR-13	13
<i>Papaver bracteatum</i>	Plour	Iran, Province Mazandaran, near Plour, central Alborz Mts.	Plr	AGh-02	15
<i>Papaver bracteatum</i>	Qale Samur	Iran, Province West Azerbaijan, near Belch Sur, Zagros Mts.	QSr	AR-11	15

<i>Papaver bracteatum</i>	Somagh	Iran, Province Qazvin, near Somagh, west Alborz Mts.	Sgh	AGh-04	15
<i>Papaver bracteatum</i>	Tarom Sofla	Iran, Province Qazvin, near Somagh, west Alborz Mts.	TSI	AGh-05	20
<i>Papaver bracteatum</i>	Yoush	Iran, Province Mazandaran, near Yoush, central Alborz Mts.	Ysh	AGh-01	20

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