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Drivers of *Hymenoscyphus fraxineus* infections in inner alpine valleys of North Western Italy

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Supplementary Table S2

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Table S2. Results from the fitting of unbiased recursive binary partitioning tree models based on conditional inference. For each input variable (see main text for acronyms definition) the *c* and *P* values associated with the tree root (is no splits are present) or with the significant splits are reported. When significant *P* values are obtained, the corresponding variable is marked with an asterisk (*) and the critical threshold value for the first and second split (if present) are indicated. The mathematical description of each node is reported in curly brackets with the corresponding input variable interval and associated probability of infection of *Hymenoscyphus fraxineus*, along with the 95% confidence interval bounds.

Input variable	Root	Split 1	Threshold split 1	Split 2	Threshold split 2	Nodes
x, y, sect	-	*x* c=3.261 P=$1.98\cdot10^{-1}$	-	*x** c=11.197 P=$2.46\cdot10^{-3}$	358069 m	$\begin{cases} y > 5067384 \text{ m} \\ x > 358069 \text{ m} \\ Pr_{(I=1)} = 75.0\% \ (52.6 - 89.6\% \ \text{CI}_{95\%}) \end{cases}$
	-	*y** c=5.864 P=$4.56\cdot10^{-2}$	5067384 m	*y* c=0.112 P=$9.82\cdot10^{-1}$	-	$\begin{cases} y \leq 5067384 \text{ m} \\ Pr_{(I=1)} = 17.2\% \ (9.5 - 28.6\% \ \text{CI}_{95\%}) \end{cases}$
	-	*sect* c=6.568 P=$1.08\cdot10^{-1}$	-	*sect** c=9.143 P=$3.07\cdot10^{-2}$	-	$\begin{cases} y > 5067384 \text{ m} \\ x \leq 358069 \text{ m} \\ Pr_{(I=1)} = 10.0\% \ (1.8 - 31.6\% \ \text{CI}_{95\%}) \end{cases}$
dbh, h	*dbh* c=1.832 P=$3.21\cdot10^{-1}$ *h* c=4.253 P=$7.68\cdot10^{-2}$	-	-	-	-	-
el, sl	-	*el** c=5.677 P=3,41·10^{-2}	895 m	-	-	$\begin{cases} el \leq 895 \text{ m} \\ Pr_{(I=1)} = 46.7\% \ (29.5 - 65.5\% \ \text{CI}_{95\%}) \end{cases}$
		sl c=2.510 P=2,13·10^{-1}	-	-	-	$\begin{cases} el > 895 \text{ m} \\ Pr_{(I=1)} = 18.9\% \ (11.0 - 29.5\% \ \text{CI}_{95\%}) \end{cases}$
$Tmean_1$, $Tmean_2$, $Tmean_3$, $Tmean_4$, $Tmean_5$, $Tmean_6$, $Tmean_7$, $Tmean_8$, $Tmean_9$, $Tmean_{10}$, $Tmean_{11}$, $Tmean_{12}$	$Tmean_1$ c=5.302 P=$2.28\cdot10^{-1}$ $Tmean_2$ c=3.514 P=$5.29\cdot10^{-1}$ $Tmean_3$ c=2.913 P=$6.68\cdot10^{-1}$	-	-	-	-	

	Tmean$_4$ c=2.706 P=7.17·10^{-1} *Tmean*$_5$ c=2.646 P=7.32·10^{-1} *Tmean*$_6$ c=2.663 P=7.28·10^{-1} *Tmean*$_7$ c=2.893 P=6.73·10^{-1} *Tmean*$_8$ c=3.027 P=6.41·10^{-1} *Tmean*$_9$ c=3.239 P=5.92·10^{-1} *Tmean*$_{10}$ c=4.000 P=4.28·10^{-1} *Tmean*$_{11}$ c=4.183 P=3.94·10^{-1} *Tmean*$_{12}$ c=7.420 P=7.47·10^{-2}					
Tmin1, Tmin2, Tmin3, Tmin4, Tmin5, Tmin6, Tmin7, Tmin8, Tmin9, Tmin10, Tmin11, Tmin12	*Tmin*$_1$ c=5.371 P=2.20·10^{-1} *Tmin*$_2$ c=4.187 P=3.93·10^{-1}	-	-	-	-	

	$Tmin_3$ c=3.457 P=5,42·10^{-1} $Tmin_4$ c=3.351 P=5.66·10^{-1} $Tmin_5$ c=3.234 P=5.93·10^{-1} $Tmin_6$ c=3.384 P=5.58·10^{-1} $Tmin_7$ c=3.668 P=4.96·10^{-1} $Tmin_8$ c=3.813 P=4.65·10^{-1} $Tmin_9$ c=4.160 P=3.98·10^{-1} $Tmin_{10}$ c=5.126 P=2.49·10^{-1} $Tmin_{11}$ c=4.632 P=3.18·10^{-1} $Tmin_{12}$ c=7.718 P=6.37·10^{-2}					
$Tmax_1$, $Tmax_2$, $Tmax_3$, $Tmax_4$, $Tmax_5$, $Tmax_6$, $Tmax_7$, $Tmax_8$, $Tmax_9$, $Tmax_{10}$, $Tmax_{11}$, $Tmax_{12}$	-	$Tmax_1$ c=6.251 P=1.39·10^{-1}	-	-	-	$\begin{cases} Tmax_{12} > 4.08501\ °C \\ Pr_{(I=1)} = 44.9\% \ (31.3 - 59.4\% \ CI_{95\%}) \end{cases}$

	-	$Tmax_2$ c=4.606 P=3.22·10^{-1}	-	-	-	$\begin{cases} Tmax_{12} \leq 4.08501\ °C \\ Pr_{(I=1)} = 10.9\%\ (4.9 - 22.2\%\ CI_{95\%}) \end{cases}$
	-	$Tmax_3$ c=4.085 P=4.12·10^{-1}	-	-	-	
	-	$Tmax_4$ c=3.986 P=4.31·10^{-1}	-	-	-	
	-	$Tmax_5$ c=4.011 P=4.26·10^{-1}	-	-	-	
	-	$Tmax_6$ c=4.686 P=3.10·10^{-1}	-	-	-	
	-	$Tmax_7$ c=5.051 P=2.58·10^{-1}	-	-	-	
	-	$Tmax_8$ c=4.975 P=2.68·10^{-1}	-	-	-	
	-	$Tmax_9$ c=4.934 P=2.74·10^{-1}	-	-	-	
	-	$Tmax_{10}$ c=5.370 P=2.20·10^{-1}	-	-	-	
	-	$Tmax_{11}$ c=4,466 P=3,44·10^{-1}	-	-	-	
	-	$Tmax_{12}$* c=8.710 P=3,73·10^{-2}	4.08501 °C	-	-	
Ws_1, Ws_2, Ws_3, Ws_4, Ws_5, Ws_6, Ws_7, Ws_8, Ws_9, Ws_{10}, Ws_{11}, Ws_{12}	Ws_1 c=1.984 P=8.75·10^{-1} Ws_2 c=2.271 P=8.17·10^{-1}	-	-	-	-	-

	Ws$_3$ *c*=1.589 *P*=9.39·10^{-1} *Ws*$_4$ *c*=1.477 *P*=9.53·10^{-1} *Ws*$_5$ *c*=2.278 *P*=8.15·10^{-1} *Ws*$_6$ *c*=2.663 *P*=7.28·10^{-1} *Ws*$_7$ *c*=2.423 *P*=7.83·10^{-1} *Ws*$_8$ *c*=2.628 *P*=7.36·10^{-1} *Ws*$_9$ *c*=2.185 *P*=8.35·10^{-1} *Ws*$_{10}$ *c*=1.908 *P*=8.89·10^{-1} *Ws*$_{11}$ *c*=1.340 *P*=9.67·10^{-1} *Ws*$_{12}$ *c*=1,724 *P*=9.19·10^{-1}					
$P_1, P_2, P_3, P_4, P_5, P_6, P_7, P_8, P_9, P_{10}, P_{11}, P_{12}$	-	P_1 *c*=2.277 *P*=8.15·10^{-1}	-	P_1 *c*=0.062 *P*=1	-	$\begin{cases} P_4 > 41.25008 \text{ mm} \\ P_7 > 62.26657 \text{ mm} \\ Pr_{(I=1)} = 80.0\% \ (53.5 - 94.3\% \ \text{CI}_{95\%}) \end{cases}$

	-	P_2 $c=1.763$ $P=9.13\cdot10^{-1}$	-	P_2 $c=0.120$ $P=1$	-	$\begin{cases} P_4 > 41.25008\ \text{mm} \\ P_7 \leq 62.26657\ \text{mm} \\ Pr_{(I=1)} = 26.7\%\ (14.8-41.1\%\ \text{CI}_{95\%}) \end{cases}$ $\begin{cases} P_4 \leq 41.25008\ \text{mm} \\ Pr_{(I=1)} = 9.1\%\ (3.2-21.0\%\ \text{CI}_{95\%}) \end{cases}$
	-	P_3 $c=5.787$ $P=1.77\cdot10^{-1}$	-	P_3 $c=0.264$ $P=1$	-	
	-	P_4* $c=8.645$ $P=3.87\cdot10^{-2}$	41.25008 mm	P_4 $c=0.260$ $P=1$	-	
	-	P_5 $c=5.508$ $P=2.05\cdot10^{-1}$	-	P_5 $c=5.131$ $P=2.48\cdot10^{-1}$	-	
	-	P_6 $c=3.480$ $P=5.37\cdot10^{-1}$	-	P_6* $c=9.648$ $P=2.25\cdot10^{-2}$	-	
	-	P_7 $c=0.925$ $P=9.93\cdot10^{-1}$	-	P_7* $c=11.271$ $P=9.41\cdot10^{-3}$	62.26657 mm	
	-	P_8 $c=1.459$ $P=9.55\cdot10^{-1}$	-	P_8* $c=8.685$ $P=3.78\cdot10^{-2}$	-	
	-	P_9 $c=0.432$ $P=1$	-	P_9 $c=2.113$ $P=8.50\cdot10^{-1}$	-	
	-	P_{10} $c=0.897$ $P=9{,}94\cdot10^{-1}$	-	P_{10} $c=0.257$ $P=1$	-	
	-	P_{11} $c=5.855$ $P=1.71\cdot10^{-1}$	-	P_{11} $c=0.012$ $P=1$	-	
	-	P_{12} $c=2.800$ $P=6.95\cdot10^{-1}$	-	P_{11} $c=0.122$ $P=1$	-	
$Tmean_{fa}$, $Tmean_{wi}$, $Tmean_{sp}$, $Tmean_{su}$	$Tmean_{fa}$ $c=3.839$ $P=1.86\cdot10^{-1}$ $Tmean_{wi}$ $c=5.139$ $P=9.04\cdot10^{-2}$	-	-	-	-	-

	$Tmean_{sp}$ c=2.756 P=3.35·10^{-1} $Tmean_{su}$ c=2.884 P=3.13·10^{-1}					
$Tmin_{fa}$, $Tmin_{wi}$, $Tmin_{sp}$, $Tmin_{su}$	$Tmin_{fa}$ c=4.522 P=1.27·10^{-1} $Tmin_{wi}$ c=5.620 P=6.91·10^{-2} $Tmin_{sp}$ c=3.346 P=2.43·10^{-1} $Tmin_{su}$ c=3.659 P=2.05·10^{-1}	-	-	-	-	-
$Tmax_{fa}$, $Tmax_{wi}$, $Tmax_{sp}$, $Tmax_{su}$	$Tmax_{fa}$ c=4.697 P=1.15·10^{-1} $Tmax_{wi}$ c=6.136 P=5.20·10^{-2} $Tmax_{sp}$ c=3.867 P=1.83·10^{-1} $Tmax_{su}$ c=4.789 P=1.10·10^{-1}	-	-	-	-	-
Ws_{fa}, Ws_{wi}, Ws_{sp}, Ws_{su}	Ws_{fa} c=1.924 P=5.15·10^{-1}	-	-	-	-	-

	Ws_{wi} c=2.026 P=4.89·10^{-1} Ws_{sp} c=1.796 P=5.48·10^{-1} Ws_{su} c=2.574 P=3.69·10^{-1}					
P_{fa}, P_{wi}, P_{sp}, P_{su}	-	P_{fa} c=4.657 P=1.18·10^{-1}	-	-	-	$\begin{cases} P_{sp} > 161.00604 \text{ mm} \\ Pr_{(I=1)} = 51.4\% \ (34.9 - 67.5\% \text{ CI}_{95\%}) \end{cases}$ $\begin{cases} P_{sp} \leq 161.00604 \text{ mm} \\ Pr_{(I=1)} = 14.5\% \ (7.4 - 25\% \text{ CI}_{95\%}) \end{cases}$
	-	P_{wi} c=2.356 P=4.13·10^{-1}	-	-	-	
	-	P_{sp}* c=9.408 P=8.61·10^{-3}	161.00604 mm	-	-	
	-	P_{su} c=1.919 P=5.16·10^{-1}	-	-	-	