Figure A.1. Mean angle of the z-axis of the accelerometer (vertical axis, parallel to the neck of the swan) of the collar when water was detected, for all individuals combined (n=439,813 observations). An angle of 90° or -90° corresponds to the neck being straight up or straight downwards respectively. 0° corresponds to the neck in horizontal position. For aquatic foraging one would expect the neck to be below horizontal position. For 80% of all observations for which water was detected, this was indeed the case (the bottom part of the graph). The other 20% (86,679 observations) might still be aquatic foraging but with a different angle, or can represent incidences in which the swan was resting or preening on open (sea)water with waves caused by either the tide or the wind. Another possible explanation for water being detected at angles >0° is in the seconds right after aquatic foraging, when the neck is already moving towards an upright position but water droplets are still covering both the conductivity sensor on the neck-collar.

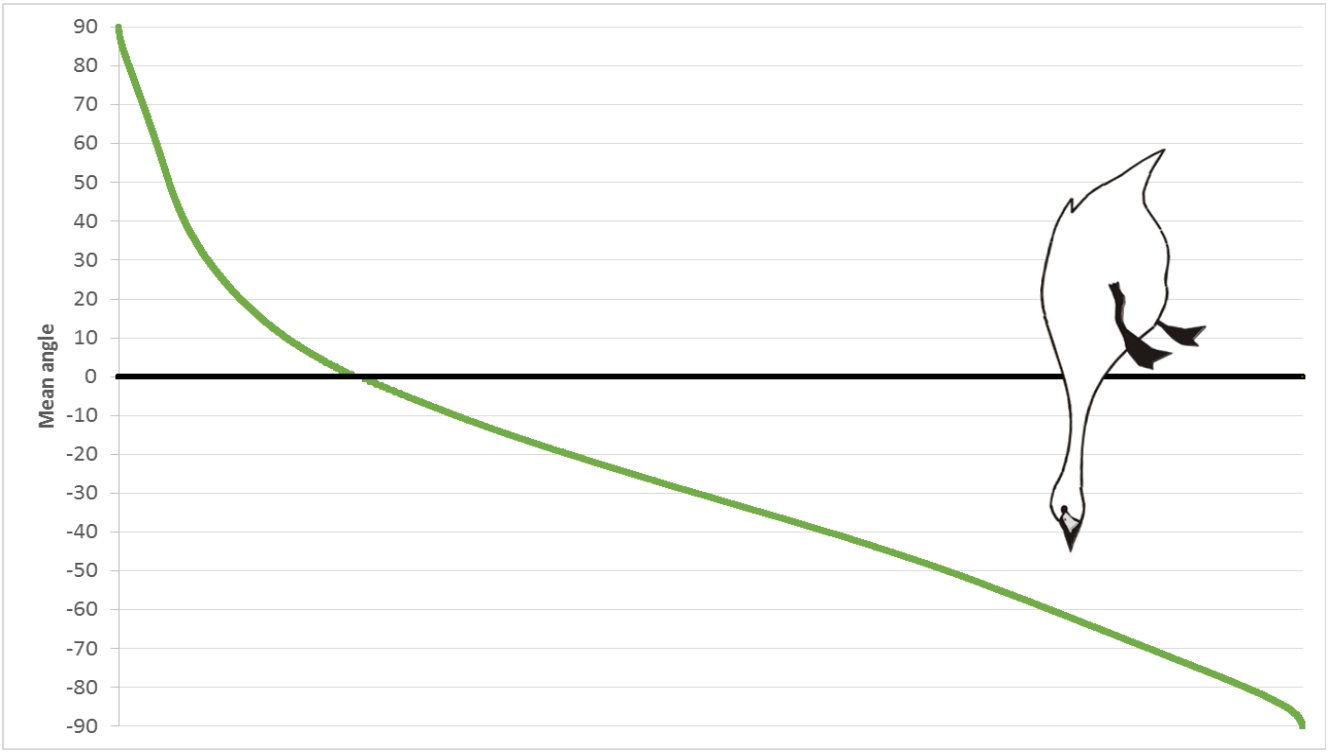


Figure B.1. Variable importance plot for random forest classification. A higher value of mean decrease in accuracy indicates variables that contribute more to the accuracy of the classification.

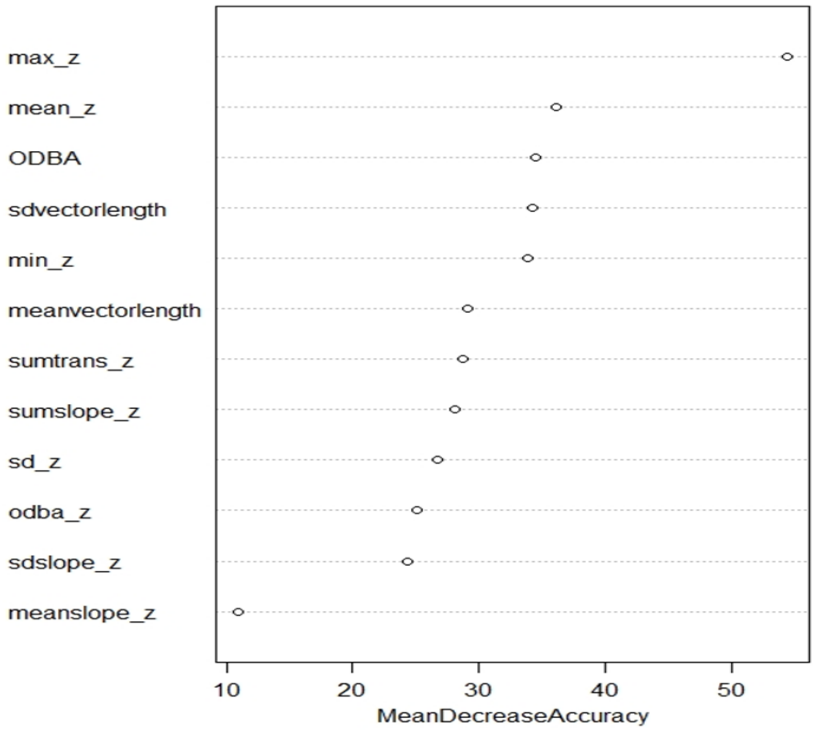
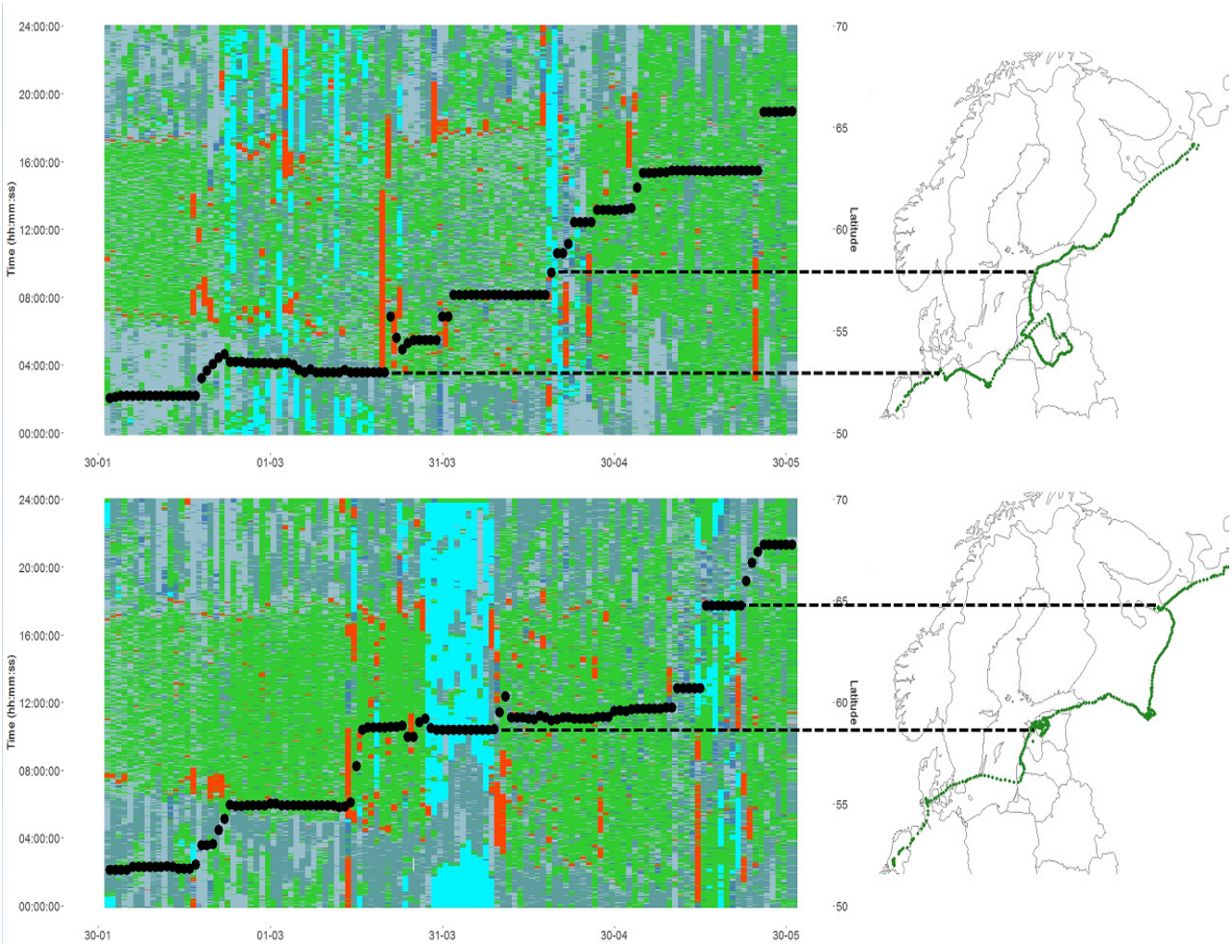


Table C.1. Confusion matrix with predicted values for the test dataset for the classification model with only the three most important summary statistics included (max z-value and mean z-value, ODBA), abbreviations for behaviours are given in Table 3. Overall accuracy of this model was 0.9099 (0.8945-0.9236, 95% CI). Below the matrix are the performance statistics of the random forest classification model per behavioural class calculated based on true positive (TP), true negative (TN), false positive (FP) and false negative (FN) predictions.

Confusion matrix						
Prediction ↓	Reference →	321	139	0	2	0
SL		5	518	16	20	0
ST		0	7	46	12	0
SW		1	52	12	424	0
TE		0	0	0	0	104
FLY		SL	ST	SW	TE	FLY
Performance statistics		0.9817	0.8780	0.6216	0.9258	1
Sensitivity/recall =TP/((TP+FN))		0.9878	0.9574	0.9872	0.9406	1
Specificity =TN/((TN+FP))		0.9599	0.8448	0.6476	0.8506	1
Matthews correlation coefficient =((TP * TN)-(FP * FN))/v((TP+FP)*(TP+FN)*(TN+FP)*(TN+FN))		0.9652	0.8410	0.7394	0.8452	1

Figure D.1. Individual time budgets for spring (1 February–25 May) 2017 and 2018 for 12 adult female individuals based on their accelerometer and water sensor data (every 2 min). The colours represent different behaviours (see legend).



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