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Utilization of nitrogen- and mineral-rich vascular forage plants by reindeer in winter

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All the data presented in the tables of the published article are correct. However, it is important to notice that all data on the content of ash, cell wall content, cellulose, crude protein, ether extract, hemicellulose, lignin, nitrogen and water-soluble carbohydrates of forage plants in the running text of the article (Summary, Introduction, Results and Discussion section) are presented as one thousandth of the actual value (e.g. the crude protein content of wintergreen parts of graminoids is presented as 0.072-0.108 g/kg DM in the abstract instead of the correct values of 72-108 g/kg DM).

CORRECTED SUMMARY

The marginal winter pastures of reindeer and caribou (Rangifer tarandus) in Arctic and sub-Arctic areas are assumed to be nitrogen- and mineral-poor. Reindeer eat a mixed diet consisting of nitrogen deficient lichens and a wide variety of vascular plants in winter. Some reindeer populations manage to maintain carcass mass outside the growing season and very little is known about the ability of reindeer to utilize vascular plants in this season. The chemical composition and in vitro digestibility of 17 species of vascular forage plants and one species of moss collected mid-winter from beneath the snow at an inland winter pasture in northern Norway were determined. Wintergreen parts of graminoids had a high content of crude protein (72–108 g/kg dry matter (DM)) and water-soluble carbohydrates (98–167 g/kg DM) and were highly digestible (50–65 % DM) compared with the withered parts of the plants (27-53 % DM). The digestibility of both shrubs and graminoids was inversely related to content of cellulose and lignin, but positively correlated with increasing contents of water-soluble carbohydrates. Shrubs were relatively calcium-rich (3·6-6·1 g/kg DM) while wintergreen graminoids contained up to 10·0 g/kg DM of potassium, 1·5 g/kg DM magnesium and 2·1 g/kg DM phosphorus. The present study demonstrates that the wintergreen parts of several species of vascular plants are nutritious, containing high levels of nitrogen and minerals, and that they are highly digestible to reindeer in winter. Vascular plants may, therefore, be more important to reindeer and caribou in winter than previously realized.