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Appendix 1. Geographic comparisons of leaf and leaf litter palatability. Plant species and collection sites. Abbreviations used in Fig. 1 and 2 for sites are indicated in parentheses. LV=leaves; LT=litter.

Taxonomic group	Germany (Baltic Sea)	Germany (Atlantic Ocean)	Portugal
Chenopodiaceae	Bottsand (B) 54°25.59 N; 8°59.85 E <i>Atriplex hastata</i> LV <i>A. hastata</i> LT	Westerhever (W) 54°22.26 N; 8°38.52 E <i>A. hastata</i> LV <i>A. hastata</i> LT	Bias (I) 37°02' N; 07°46' W <i>Atriplex portulacoides</i> LV <i>A. portulacoides</i> LT
	<i>Salicornia europaea</i> LV	<i>S. europaea</i> LV	<i>Sarcocornia</i> spp. ¹ LV
Juncaceae	<i>Juncus gerardi</i> LV	<i>Suaeda maritima</i> LV <i>J. gerardi</i> LV	<i>Suaeda maritima</i> LV <i>J. maritima</i> LV
Plumbaginaceae		<i>Limonium vulgare</i> LV <i>L. vulgare</i> LT	<i>L. algarvensis</i> LV <i>L. algarvensis</i> LT
Poaceae		<i>Spartina anglica</i> ² LV <i>S. anglica</i> ² LT	<i>Spartina maritima</i> LV <i>Spartina maritima</i> LT <i>Spartina densiflora</i> LV <i>S. densiflora</i> LT

1. Two similar species of *Sarcocornia* (*S. fruticosa* and *S. perennis*) and one of *Arthrocnemum* (*A. macrostachyum*) occur at these sites. Our collections may represent any of these species or a mixture, but did not include *Salicornia europaea*.

2. *Spartina anglica* is a recent species that originated in the late 1800s when *S. alterniflora* introduced to Great Britain hybridized with native *S. maritima* to form the sterile hybrid *S. townsendii*, which underwent polyploidy to produce the fertile *S. anglica* (Adam 1990).

Appendix 2. Study sites for geographic sampling. Two similar species of *Sarcocornia* (*S. fruticosa* and *S. perennis*) and one of *Arthrocnemum* (*A. macrostachyum*) occur at southern sites along with *Salicornia europaea*. Our “*Sarcocornia*” data may represent any four of these species or a mixture, depending on the abundance of each species at each site.

Site	Country	Latitude	Longitude	Plant species studied
High-latitude sites				
Schobüll	Germany	54°30.48 N	8°59.85 E	<i>Atriplex hastata</i> , <i>Juncus. gerardi</i> , <i>Salicornia europaea</i> , <i>Spartina anglica</i> , <i>Suaeda maritima</i>
Bottsand	Germany	54°25.59 N	10°17.77 E	<i>A. hastata</i> , <i>J. gerardi</i>
Hohwacht	Germany	54°20.53 N	10°38.57 E	<i>A. hastata</i> , <i>J. gerardi</i>
Westerveher	Germany	54°22.26 N	8°38.52 E	<i>A. hastata</i> , <i>J. gerardi</i> , <i>Limonium vulgare</i> , <i>S. europaea</i> , <i>S. anglica</i> , <i>Suaeda maritima</i>
Spiekerooog	Germany	53°45.86 N	7°43.85 E	<i>A. hastata</i> , <i>J. gerardi</i> , <i>L. vulgare</i> , <i>S. europaea</i> , <i>S. anglica</i> , <i>Suaeda maritima</i>
Elisabeth-Außenroden	Germany	53°42.80 N	7°57.11 E	<i>A. hastata</i> , <i>L. vulgare</i> , <i>S. europaea</i> , <i>S. anglica</i> , <i>S. maritima</i>
Schiermonnikoog T2	the Netherlands	53°29.70 N	6°17.29 E	<i>A. hastata</i> , <i>J. gerardi</i> , <i>L. vulgare</i> , <i>S. europaea</i> , <i>S. anglica</i> , <i>Suaeda maritima</i>
Schiermonnikoog T3	The Netherlands	53°29.57 N	6°16.19 E	<i>A. hastata</i> , <i>J. gerardi</i> , <i>L. vulgare</i> , <i>S. europaea</i> , <i>S. anglica</i> , <i>Suaeda maritima</i>
Schiermonnikoog dock	The Netherlands	53°28.20 N	6°11.48 E	<i>S. europaea</i>
Cäciliengroden	Germany	53°28.92 N	8°03.10 E	<i>A. hastata</i> , <i>L. vulgare</i> , <i>S. europaea</i> , <i>S. anglica</i> , <i>Suaeda maritima</i>
Low-latitude sites				
Alcochete	Portugal	38°45.61 N	8°56.03 W	<i>A. hastata</i> , <i>Juncus</i> sp., <i>Limonium</i> sp., <i>Sarcocornia</i> spp., <i>Spartina maritima</i> ,
Serubal	Portugal	38°29.39 N	8°47.74 W	<i>Juncus</i> sp., <i>Limonium</i> sp., <i>Sarcocornia</i> spp., <i>S. densiflora</i> , <i>Suaeda maritima</i>
Rio Mira	Portugal	37°43.56 N	8°46.14 W	<i>Juncus</i> sp., <i>Limonium</i> sp., <i>Sarcocornia</i> spp., <i>S. densiflora</i> , <i>Spartina maritima</i> , <i>Suaeda maritima</i>
Casas del Terron	Spain	37°12.89 N	7°10.54 W	<i>A. portulacoides</i> , <i>Juncus</i> sp., <i>Limonium</i> sp., <i>Sarcocornia</i> spp., <i>S. densiflora</i> , <i>Spartina maritima</i> , <i>Suaeda maritima</i>
Salinas de Bacuta	Spain	37°15.93 N	6°58.98 W	<i>A. portulacoides</i> , <i>Juncus</i> sp., <i>Limonium</i> sp., <i>Sarcocornia</i> spp., <i>S. densiflora</i> , <i>Suaeda maritima</i>
Isla Canela	Spain	37°11.44 N	7°20.74 W	<i>A. portulacoides</i> , <i>Juncus</i> sp., <i>Limonium</i> sp., <i>Sarcocornia</i> spp., <i>S. densiflora</i> , <i>Suaeda maritima</i>
El Rocío	Spain	37°07.87 N	6°29.21 W	<i>A. portulacoides</i> , <i>Juncus</i> sp., <i>Limonium</i> sp., <i>Sarcocornia</i> spp., <i>S. densiflora</i> , <i>Spartina maritima</i> , <i>Suaeda maritima</i>
Alvor Marina	Portugal	37°07.55 N	8°35.84 W	<i>Limonium</i> sp., <i>Sarcocornia</i> spp., <i>Spartina maritima</i> , <i>Suaeda maritima</i>
Pedras d'el Rei	Portugal	37°05.71 N	7°40.30 W	<i>A. portulacoides</i> , <i>Juncus</i> sp., <i>Limonium</i> sp., <i>Sarcocornia</i> spp., <i>S. densiflora</i> , <i>Spartina maritima</i> , <i>Suaeda maritima</i>
Praia de Faro	Portugal	37°00.77 N	7°59.39 W	<i>A. hastata</i> , <i>A. portulacoides</i> , <i>Juncus</i> sp., <i>Limonium</i> sp., <i>Sarcocornia</i> spp., <i>S. densiflora</i> , <i>Spartina maritima</i> , <i>Suaeda maritima</i>