

Supplementary Fig. S2: Principal coordinate analysis (PCoA) for individual vegetation types.

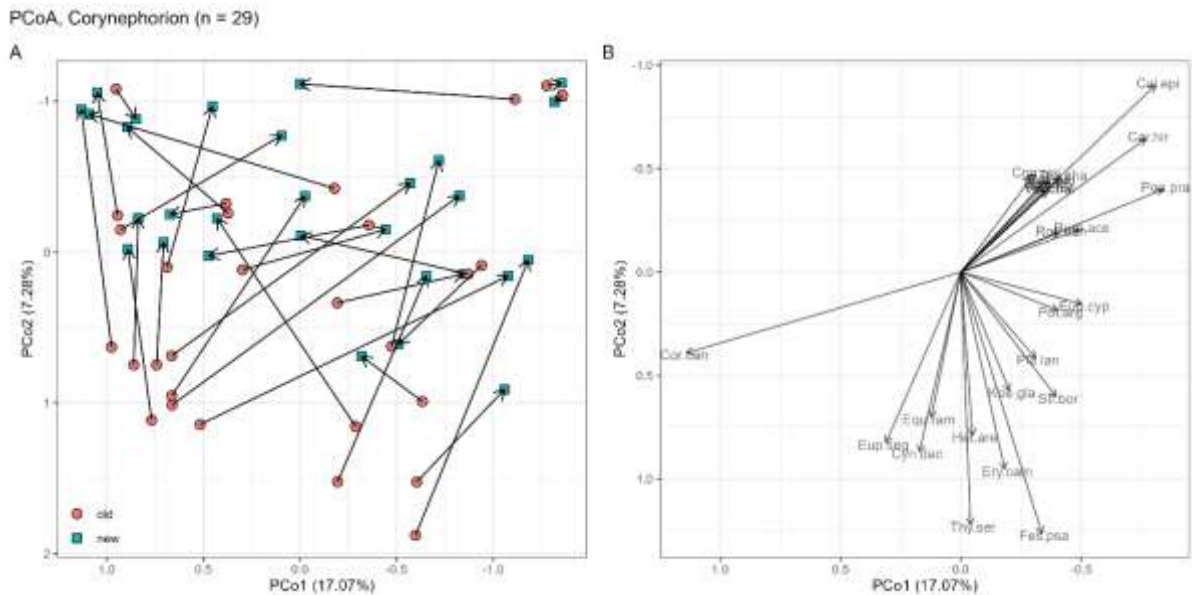


Figure S2.1: Principal coordinate analysis (PCoA) for pioneer sand vegetation (*Corynephorion canescentis*) with scores for sites (A) and correlations of species with the ordination axes (B). Species names are abbreviated to the first three letters of the genus name and species epithet. Only the 25 best-fitting species are displayed.

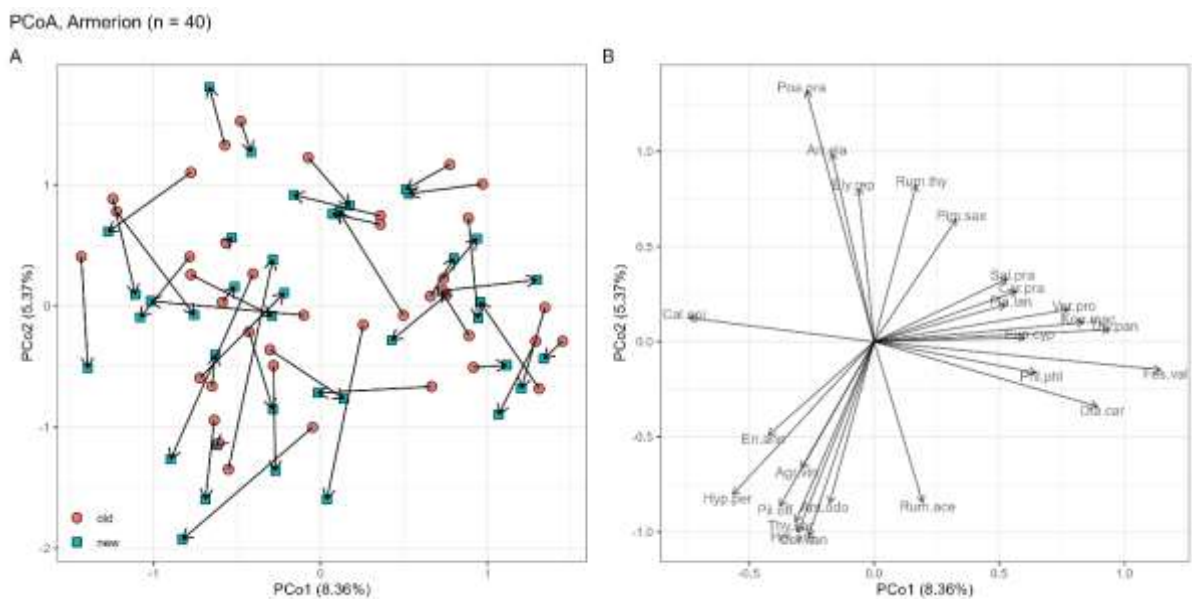


Figure S2.2: Principal coordinate analysis (PCoA) for closed acidophilous and ruderalised sand grasslands (*Armerion elongatae*) with scores for sites (A) and correlations of species with the ordination axes (B). Species names are abbreviated to the first three letters of the genus name and species epithet. Only the 25 best-fitting species are displayed.

PCoA, *Festucion valesiacae* (n = 17)

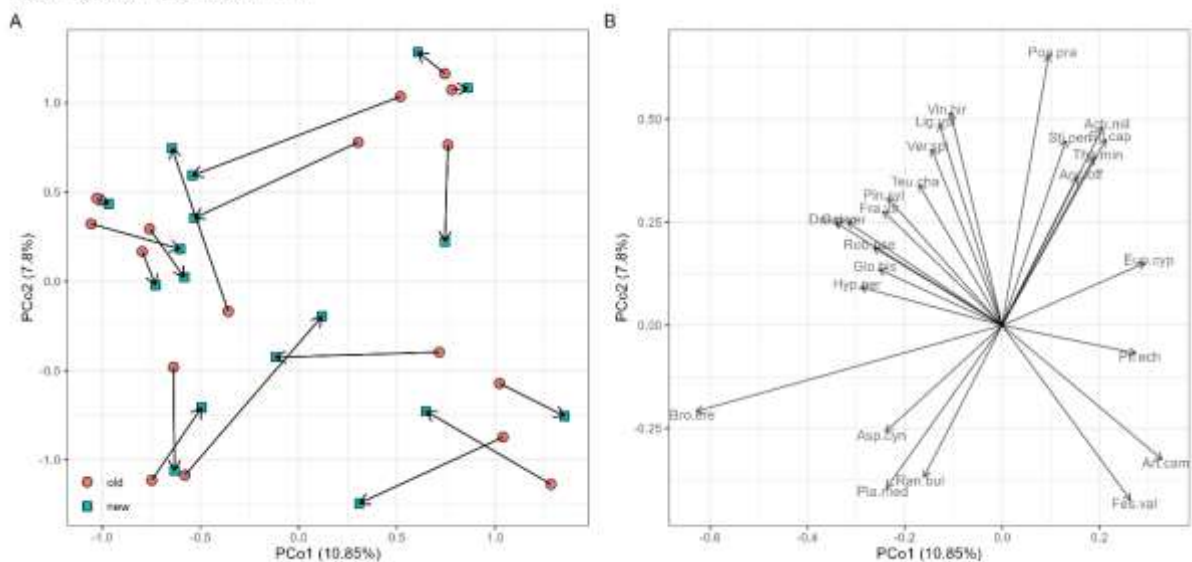


Figure S2.3: Principal coordinate analysis (PCoA) for closed basiphilous sand grasslands (*Festucion valesiacae*) with scores for sites (A) and correlations of species with the ordination axes (B). Species names are abbreviated to the first three letters of the genus name and species epithet. Only the 25 best-fitting species are displayed.

Abbreviations of species names

Ach.mil = *Achillea millefolium* agg.

Agr.vin = *Agrostis vinealis*

Anc.off = *Anchusa officinalis*

Ant.odo = *Anthoxanthum odoratum*

Arr.ela = *Arrhenatherum elatius*

Art.cam = *Artemisia campestris*

Asp.cyn = *Asperula cynanchica*

Ave.pra = *Avenula pratensis*

Bot.isc = *Bothriochloa ischaemum*

Bro.ere = *Bromus erectus*

Cal.epi = *Calamagrostis epigejos*

Car.hir = *Carex hirta*

Car.lip = *Carex liparocarpos*

Car.pra = *Carex praecox*

Cha.rat = *Chamaecytisus ratisbonensis*

Con.arv = *Convolvulus arvensis*

Cor.can = *Corynephorus canescens*

Cyn.dac = *Cynodon dactylon*

Dia.car = *Dianthus carthusianorum* agg.

Dor.ger = *Dorycnium germanicum*

Ely.rep = *Elymus repens*

Equ.ram = *Equisetum ramosissimum*

Eri.ann = *Erigeron annuus*

Ery.cam = *Eryngium campestre*

Eup.cyp = *Euphorbia cyparissias*

Eup.seg = *Euphorbia seguieriana*

Fes.psa = *Festuca psammophila* subsp. *dominii*

Fes.rub = *Festuca rubra*

Fes.val = *Festuca valesiaca* s. l.

Fra.vir = *Fragaria viridis*

Gal.ver = *Galium verum*

Glo.bis = *Globularia bisnagarica*

Hel.are = *Helichrysum arenarium*

Hyp.per = *Hypericum perforatum*

Koe.gla = *Koeleria glauca*

Koe.mac = *Koeleria macrantha*

Lig.vul = *Ligustrum vulgare*
Mal.syl = *Malus sylvestris* agg.
Med.fal = *Medicago falcata*
Phl.phl = *Phleum phleoides*
Pil.ech = *Pilosella echinoides*
Pil.off = *Pilosella officinarum*
Pim.sax = *Pimpinella saxifraga*
Pin.syl = *Pinus sylvestris*
Pla.lan = *Plantago lanceolata*
Pla.med = *Plantago media*
Poa.pra = *Poa pratensis* agg.
Pot.arg = *Potentilla argentea*
Pot.ver = *Potentilla verna* agg.
Ran.bul = *Ranunculus bulbosus*
Rha.cat = *Rhamnus cathartica*
Rob.pse = *Robinia pseudoacacia*
Ros.can = *Rosa canina* agg.
Rum.ace = *Rumex acetosella*
Rum.thy = *Rumex thyrsiflorus*
Sal.pra = *Salvia pratensis*
San.min = *Sanguisorba minor*
Sen.jac = *Senecio jacobaea*
Sti.bor = *Stipa borysthénica*
Sti.cap = *Stipa capillata*
Sti.pen = *Stipa pennata*
Tar.sec = *Taraxacum* sect. *Taraxacum*
Teu.cha = *Teucrium chamaedrys*
Tha.min = *Thalictrum minus*
Thy.pan = *Thymus pannonicus* agg.
Thy.ser = *Thymus serpyllum*
Ver.cha = *Veronica chamaedrys*

Ver.pro = *Veronica prostrata*
Ver.spi = *Veronica spicata*
Vin.hir = *Vincetoxicum hirundinaria*