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# Online Material

**Table A.1.** Location of the sampled plots: municipality and Universal Transverse Mercator coordinates (*Y* and *X*), ages of plots, percent canopy cover, species richness (*R*) and Shannon diversity index (*H′*).

| Plot no. | Municipality | *X* (UTM) | *Y* (UTM) | Type of forest | Age (years) | Canopy cover % | *R* | *H′* |
|---|---|---|---|---|---|---|---|---|
| 1 | Bilbao | 509 000 | 4 790 000 | Oak | > 120 | 70 | 27 | 2.8 |
| 2 | Lemoa | 520 005 | 4 785 009 | Oak | 41–60 | 70 | 26 | 3.2 |
| 3 | Zornotza | 525 012 | 4 782 010 | Oak | 21–40 | 70 | 21 | 3.2 |
| 4 | Arantzazu | 517 993 | 4 776 958 | Oak | 21–40 | 90 | 24 | 3.3 |
| 5 | Abadiño | 531 984 | 4 775 994 | Oak | > 120 | 90 | 21 | 3.5 |
| 6 | Berriz | 535 009 | 4 778 020 | Oak | < 20 | 70 | 26 | 2.9 |
| 7 | Larrabetzu | 520 002 | 4 792 001 | Oak | 41–60 | 80 | 25 | 1.6 |
| 8 | Durango | 525 047 | 4 777 076 | Beech | 41–60 | 80 | 34 | 2.5 |
| 9 | Zeanuri | 523000 | 4771000 | Beech | 21–40 | 90 | 16 | 0.8 |
| 10 | Mañaria | 527 998 | 4 772 976 | Beech | < 20 | 70 | 15 | 1.1 |
| 11 | Aramaio | 534 009 | 4 770 003 | Beech | 21–40 | 70 | 26 | 3.4 |
| 12 | Dima | 526 000 | 4 774 000 | Beech | > 100 | 90 | 21 | 2.0 |
| 13 | Abadiño | 530 026 | 4 772 000 | Beech | 41–60 | 70 | 30 | 2.3 |
| 14 | Berriz | 534 975 | 4 781 030 | Beech | 21–40 | 60 | 28 | 3.4 |
| 15 | Bedia | 515 993 | 4 784 980 | Pine | 21–40 | 80 | 17 | 3.1 |
| 16 | Iurreta | 528 006 | 4 785 010 | Pine | < 20 | 60 | 21 | 3.0 |
| 17 | Lemoa | 517 995 | 4 782 005 | Pine | 21–40 | 90 | 18 | 3.1 |
| 18 | Iurreta | 530 998 | 4 781 030 | Pine | < 20 | 90 | 35 | 3.3 |
| 19 | Mañaria | 527 993 | 4 776 000 | Pine | 21–40 | 70 | 35 | 2.9 |
| 20 | Areatza | 516 010 | 4 772 971 | Pine | 21–40 | 90 | 20 | 3.1 |
| 21 | Zeanuri | 519 000 | 4 772 974 | Pine | < 20 | 60 | 27 | 2.8 |

**Table A.2.** Spearman correlations between species diversity indices and plot area, fractal dimension (*FD*), distance to the nearest patch (DNP), proximity index (*P*i), age of plot and percent canopy cover over plot.

| | | Area (Ha) | *FD* | DNP | *P*i 500 | Age | Canopy |
|---|---|---|---|---|---|---|---|
| Mixed oak forest | | | | | | | |
| Richness | *r* | 0.34 | 0.43 | –0.32 | –0.18 | 0.10 | –0.94** |
| | *p* | 0.42 | 0.29 | 0.44 | 0.66 | 0.83 | 0.001 |
| Diversity-*H′* | *r* | 0.30 | 0.51 | 0.18 | –0.04 | 0.05 | 0.54 |
| | *p* | 0.47 | 0.19 | 0.67 | 0.92 | 0.90 | 0.21 |
| Diversity-*D* | *r* | 0.29 | 0.61 | 0.18 | –0.08 | –0.02 | 0.69 |
| | *p* | 0.48 | 0.11 | 0.66 | 0.84 | 0.97 | 0.08 |
| Beech forest | | | | | | | |
| Richness | *r* | –0.52 | 0.00 | 0.66 | –0.39 | –0.56 | 0.20 |
| | *p* | 0.23 | 1.00 | 0.11 | 0.38 | 0.90 | 0.67 |
| Diversity-*H′* | *r* | –0.01 | –0.44 | 0.35 | –0.40 | 0.32 | 0.35 |
| | *p* | 0.98 | 0.33 | 0.44 | 0.38 | 0.49 | 0.45 |
| Diversity-*D* | *r* | –0.07 | –0.48 | 0.45 | –0.29 | 0.49 | 0.40 |
| | *p* | 0.88 | 0.28 | 0.31 | 0.53 | 0.27 | 0.37 |
| Pine plantations | | | | | | | |
| Richness | *r* | –0.44 | –0.34 | 0.14 | 0.22 | 0.87* | 0.32 |
| | *p* | 0.32 | 0.45 | 0.76 | 0.63 | 0.01 | 0.48 |
| Diversity-*H′* | *r* | –0.68 | –0.85* | 0.63 | 0.11 | 0 | –0.28 |
| | *p* | 0.09 | 0.02 | 0.13 | 0.81 | 1 | 0.54 |
| Diversity-*D* | *r* | –0.55 | –0.60 | 0.51 | –0.20 | –0.87* | –0.45 |
| | *p* | 0.20 | 0.16 | 0.24 | 0.67 | 0.01 | 0.31 |

* $p < 0.05$; *** $p < 0.01$.

**Table A.3.** Where species were found: 1 = mixed oak forest; 2 = beech forest; 3 = pine plantation.

| | |
|---|---|
| *Acer campestre** 1 3 | *Glecoma hederacea** 1 |
| *Ajuga reptans** 1 | *Leontodon hispidus* 1 |
| *Alnus glutinosa** 1 2 3 | *Ligustrum vulgare** 1 |
| *Anemone nemorosa** 2 | *Lithodora prostrata* 1 3 |
| *Angelica sylvestris* 3 | *Lonicera japonica* 1 |
| *Apiaceae* sp. 2 | *Lonicera periclimenum** 1 2 3 |
| *Arbutus unedo** 1 3 | *Lotus corniculatus* 3 |
| *Arum italicum** 1 2 | *Malus sylvestris 3* |
| *Asplenium scolopendrium** 1 | *Merendera montana* 2 |
| *r Asplenium trichomanes* 2 | *Oxalis acetosella** 2 3 |
| *Astracia major* 3 | *Pinus radiata* 1 2 3 |
| *Athyrium filix-femina** 1 2 3 | *Plantago lanceolata* 2 |
| *Betula celtiberica* 1 2 | *Polystichum setipherum** 1 2 3 |
| *Blechnum spicant** 1 2 3 | *Populus nigra** 2 3 |
| *Calluna vulgaris** 1 2 3 | *Potentilla erecta* 1 2 3 |
| *Cardamine hirsuta* 2 | *Potentilla sterilis* 1 3 |
| *Carduus argemone* 3 | *Primula veris subsp.columnae* 3 |
| *Carduus carpetanus* 1 | *Prunus spinosa** 1 2 |
| *Castanea sativa** 1 2 3 | *Pteridium aquilinum* 1 2 3 |
| *Centaurea debeauxii* 3 | *Pulicaria disenterica* 2 |
| *Chamaecyparis lawsoniana* 3 | *Quercus ilex ilex** 1 3 |
| *Cirsium filipendulum** 1 | *Quercus pyrenaica** 1 |
| *Clematis vitalva** 1 2 | *Quercus pyrenaica/faginea** 1 |
| *Conopodium pirenaeum** 1 | *Quercus robur** 1 2 3 |
| *Cornus sanguinea** 1 2 3 | *Quercus rubra* 1 2 3 |
| *Corylus avellana** 1 2 3 | *Ranunculus bulbosus* 1 3 |
| *Crataegus monogyna** 1 2 3 | *Ranunculus tuberosus* 1 3 |
| *Crocosmia aurea* 1 | *Rhamnus alaternus** 1 |
| *Cruciata glabra** 2 *Rosa sp.* 1 2 3 | *Robinia pseudoacacia* 1 3 |
| *Cytisus commutatus* 1 | *Rubia peregrina** 1 2 3 |
| *Daboecia cantabrica* 1 2 3 | *Rubus* sp. 1 2 3 |
| *Dactylis glomerata* 1 | *Ruscus aculeatus** 1 2 |
| *Daucus carota* 2 | *Salix atrocinerea** 1 2 3 |
| *Dryopteris affinis affinis** 1 2 3 | *Sanicula europaea** 1 |
| *Erica arborea** 1 | *Saxifraga hirsute** 2 |
| *Erica cinerea* 1 2 3 | *Sibthorpia europaea* 2 |
| *Erica vagans* 1 2 3 | *Smilax aspera** 1 2 3 |
| *Euonymus europaeus** 1 3 | *Solidago virgauera* 1 2 3 |
| *Eupatorium cannabinum* 1 3 | *Sorbus aria** 2 |
| *Euphorbia amigdaloides** 1 2 3 | *Sorbus aucuparia** 2 |
| *Euphorbia dulcis** 1 2 | *Stachis officinalis* 1 2 3 |
| *Fagus silvatica** 2 3 | *Stellaria alsine* 2 |
| *Frangula alnus** 1 2 3 | *Tamus communis** 1 3 |
| *Fraxinus excelsior** 1 2 3 | *Taraxacum praestans 2* |
| *Geranium robertianum* 2 | *Trifolium patens* 2 |
| *Geum urbanum** 1 | *Trifolium repens* 1 2 |
| *Hedera helix** 1 2 3 | *Ulex europaeus* 2 |
| *Helleborus viridis** 2 | *Ulex galii* 1 2 3 |
| *Hepatica nobilis** 2 | *Ulmus minor* 1 |
| *Humulus lupulus* 1 | *Vaccinium myrtillus** 2 3 |
| *Hypericum androsaemum** 1 2 3 | *Valeriana* sp. 2 |
| *Hypericum pulchrum** 2 3 | *Veronica arvensis** 2 |
| *Hypericum.hircinum* 2 | *Veronica chamaedris** 1 2 |
| *Ilex aquifolium** 1 2 3 | *Verónica montana** 1 |
| *Lamiastrum gabdeolon** 1 2 | *Veronica officinalis** 1 2 |
| *Lathyrus linifolius* 2 3 | *Vicia lathyroides* 1 |
| *Laurus nobilis** 1 | *Viola riviniana* 1 2 3 |

* Species characteristic of deciduous forests (Aizpuru et al., 2007).