**Table S1**. Annual weather data for Flagstaff Area, AZ, USA.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Year** | **Total precipitation (cm)** | **Δ from 30-year normal (cm)** | **Monsoon precipitation (cm)** | **Δ from 30-year normal (cm)** | **Max temperature (°C)** | **Min temperature (°C)** | **Average temperature (°C)** | **Δ from 30-year normal (°C)** |
| 2020 | 24.36 | -27.81 | 4.52 | -14.10 | 33.89 | -16.67 | 9.00 | +0.72 |
| 2021 | 65.13 | +13.00 | 26.77 | +8.15 | 35.56 | -16.67 | 8.72 | +0.44 |
| 2022 | 46.99 | -5.13 | 24.92 | +6.30 | 31.67 | -21.67 | 8.56 | +0.28 |
| 2023 | 62.64 | +10.47 | 10.74 | -7.88 | 35.56 | -22.78 | 8.22 | -0.06 |

**Table S2**. Trait table and species list. Where no citation is listed, traits were collected on-site unless otherwise noted.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Code** | **Species** | **SLA** | **LDMC** | **Height** | **Notes** |
| ARDR | *Artemisia dracunculus* | 17.0000002 | 0.2200002 | 0.6500002 |  |
| ARLU | *Artemisia ludoviciana* | 17.6777101 | 0.3162041 | 0.2918221 |  |
| ASHU | *Astragalus humistratus* | 15.0000002 | 0.2300002 | 0.0500002 |  |
| BADI | *Bahia dissecta* | 12.2888901 | 0.1635001 | 0.5823811 |  |
| BOCU | *Bouteloua curtipendula* | 18.361135 | 0.405129 | 0.308517 |  |
| BREU | *Brickellia eupatorioides* | 14.0000001 | 0.2870001 | 0.8950001 |  |
| CAHU | *Calliandra humilis* | 15.000001 | 0.230001 | 0.050001 | Values from ASHU |
| CARO | *Carex rossii* | 14.919823 | 0.376352 | 0.222867 |  |
| CEFE | *Ceanothus fendleri* | 11.559508 | 0.406586 | 0.405172 |  |
| CHAL | *Chenopodium album* | 24.237191 | 0.187954 | 0.904365 |  |
| CIWH | *Cirsium wheeleri* | 9.0000002 | 0.1900002 | 0.5400002 |  |
| COAN | *Cologania angustifolia* | 17.321392 | 0.370000 | 0.136000 |  |
| COCA | *Conyza canadensis* | 21.247827 | 0.223792 | 0.647842 |  |
| CRGR | *Cryptantha gracilis* | 7.394767 | 0.532776 | 0.365000 |  |
| DEPI | *Descurainia pinnata* | 12.6000006 | 0.2620006 | 0.6000001 | SLA and LDMC for *D*. *sophia* |
| ELEL | *Elymus elymoides* | 17.088389 | 0.351701 | 0.236241 |  |
| EPBR | *Epilobium brachycarpum* | 20.9210811 | 0.1805261 | 0.2860001 |  |
| ERAL | *Eriogonum alatum* | 8.2847231 | 0.2629001 | 0.0686001 |  |
| ERDI | *Erigeron divergens* | 18.0000002 | 0.1900012 | 0.1400002 |  |
| ERNA | *Ericameria nauseosa* | 8.8700001 | 0.3510006 | 1.0100001 |  |
| ERNE | *Erigeron neomexicanus* | 16.250000 | 0.217500 | 0.155000 | Average of all *Erigeron* spp. in 2 |
| ERRA | *Eriogonum racemosum* | 8.5521291 | 0.2882501 | 0.0515001 |  |
| ERSP | *Erigeron speciosus* | 17.0000012 | 0.2200012 | 0.3400002 |  |
| ERspp | *Eriogonum* sp. | 8.418426 | 0.275575 | 0.060050 | Average of all *Eriogonum* spp. |
| FEAR | *Festuca arizonica* | 13.574678 | 0.334118 | 0.264507 |  |
| GECA | *Geranium caespitosum* | 11.2207971 | 0.2409501 | 0.2381821 |  |
| HEMU | *Heliomeris multiflora* | 15.081100 | 0.223565 | 0.548050 |  |
| HEOB | *Hedeoma oblongifolia* | 19.1000003 | 0.2750003 | 0.3750004 | SLA and LDMC for *H*. *nana* |
| HOWR | *Houstonia wrightii* | 12.7225071 | 0.1521501 | 0.0306501 |  |
| LACO | *Laennecia coulteri* | 20.000001 | 0.170001 | 0.430001 | Values from LASC |
| LASC | *Laennecia schiedeana* | 20.0000002 | 0.1700002 | 0.4300002 |  |
| LASE | *Lactuca serriola* | 19.7761421 | 0.1882741 | 1.1181671 |  |
| LIDA | *Linaria dalmatica* | 14.5728791 | 0.2007841 | 0.6070001 |  |
| LIIN | *Lithospermum incisum* | 12.8000001 | 0.2430001 | 0.2620001 |  |
| LIMU | *Lithospermum multiflorum* | 13.0000002 | 0.2600002 | 0.3300002 |  |
| LINE | *Linum neomexicanum* | 12.0000002 | 0.2450002 | 0.2850002 | Average of all *Linum* spp. |
| LOWR | *Lotus wrightii* | 11.133306 | 0.215083 | 0.265483 |  |
| LUAR | *Lupinus argenteus* | 16.0000002 | 0.1600002 | 0.4000002 |  |
| MACA | *Machaeranthera canescens* | 11.0577641 | 0.2587001 | 0.3745001 |  |
| MUMO | *Muhlenbergia montana* | 15.548885 | 0.476717 | 0.287150 |  |
| MUST | *Muhlenbergia straminea* | 13.619074 | 0.480625 | 0.431267 |  |
| MUWR | *Muhlenbergia wrightii* | 15.0000022 | 0.4000002 | 0.3500002 |  |
| OEEL | *Oenothera elata* | 10.586000 | 0.240000 | 1.524000 |  |
| OXLA | *Oxytropis lambertii* | 10.1807291 | 0.2491001 | 0.1687491 |  |
| PAMU | *Packera multilobata* | 13.9859901 | 0.1901001 | 0.1382001 |  |
| PEVI | *Penstemon virgatus* | 9.5874271 | 0.2488501 | 0.2452501 |  |
| PHAN | *Phaseolus angustissimus* | 25.0000005 | 0.248955 | 0.2000001 | LDMC = average legume LDMC |
| PIPR | *Piptochaetium pringlei* | 13.228868 | 0.406017 | 0.347013 |  |
| POOL | *Portulaca oleracea* | 17.0000022 | 0.0400002 | 0.0100002 |  |
| PSCO | *Psilostrophe cooperi* | 9.0000012 | 0.3000002 | 0.2300002 | Values for *Gutierrezia sarothrae* |
| PSMA | *Pseudognaphalium macounii* | 22.674334 | 0.312793 | 0.594350 |  |
| PSTE | *Psoralidium tenuiflorum* | 9.2700006 | 0.248956 | 0.5120006 | LDMC = average legume LDMC |
| QUGA | *Quercus gambelii* | 10.461431 | 0.479775 | 0.498000 |  |
| SATR | *Salsola tragus* | 9.324878 | 0.189129 | 0.436775 |  |
| SCSC | *Schizachyrium scoparium* | 17.0000032 | 0.3300002 | 0.5200002 |  |
| STPA | *Stephanomeria pauciflora* | 6.8100001 | 0.237557 | 0.2000011 | LDMC = average aster LDMC |
| TAOF | *Taraxacum officinale* | 23.0000002 | 0.1800002 | 0.0700002 |  |
| TRRA | *Tragia ramosa* | 15.149304 | 0.270135 | 0.319000 |  |
| VETH | *Verbascum thapsus* | 27.815037 | 0.214501 | 0.172300 |  |
| VIPU | *Vicia pulchella* | 14.547273 | 0.288505 | 0.727071 |  |
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