**Flora of the Dubois Badlands (6-20-16)**

 **RT Hawke June 2016**

 **Revised June 20, 2016**

As a background to the plants you will be seeing, the Badlands we will be exploring were formed in an ancient basin some 50 million years ago (Eocene). These delta (sand) and lake (mud) deposits were then eroded to what we see today. The sandstone (tan layers) and the mudstone (red layers) are easily eroded making it difficult for plants to grow. Many people see these formations and think that nothing can live here, yet badlands are rich in plant diversity and house an abundance of wildlife. In the small area we will be exploring, there are at least 10 species of Astragalus, including the rare *Astragalus gilviflorus* var. *purpureus*. The Badlands are largely devoid of trees and shrubs, but many perennial mat-forming forbs and grasses live happily in this harsh environment, developing adaptations similar to alpine plants. The Dubious area receives 8 inches of precipitation a year, thus defining it as a desert.

 **DICOTS**

**Amaranthaceae (formerlyl Chenopodiaceae family)**

*Atriplex confertifolia* shadscale

 *Atriplex* sp*. BD*

 *Chenopodium album* lambsquarters

 *Krascheninnikovia lanata* winterfat

 *Salsola kali* Russian thistle

**Anicardiaceae**

*Rhus trilobata* squaw bush/skunkbush sumac

**Asteraceae**

*Artemisia frigida* fringed sagewort

 *Artemisia* sp*. BD*

 *Artemisia tridentata* big sagebrush

 *Chaenactis douglasii* pincushion/dustymaiden

 *Ericameria nauseosa* rubber rabbitbrush

 *Chrysothamnus viscidiflora* green/low/yellow/Douglas rabbitbrush

 *Cirsium* sp*.* thistle

 *Erigeron pulcherrimus* fleabane

 *Gutierrezia sarothrae* matchweed/broom snakeweed *SR*

 *Hymenopappus filifolius* fineleaf hymenopappus

 *Lactuca serriola* prickly lettuce

 *Packera cana* woolly groundsel *BD*

 *Platyschkuhria integrifolia* oblong leaf bahia SR

 *Stenotus acaulis (*syn. *Happlopappus)* stemless mockgoldenweed

 *Stephanomeria minor* var*. minor (syn. S. tenufolia)* skeletonweed/wirelettuce

 *Tetraneuris acaulis (*syn*. Hymenoxys)* stemless four-nerve daisy

 *Thelesperma subnudum* var*. marginatum (*syn*. T. marginatum)* green thread/Navajo tea

 *Townsendia incana* desert star/hoary Townsend daisy *BD*

 *Tragopogon dubius* western salsify

 *Xanthisma grindelioidies (syn. Machaeranthera grindelioidies)* rayless tansysaster

**Boraginaceae**

 *Cryptantha celosioides* miner’s-candle/buttecandle

 *Hackelia floribunda* stickseed

**Brassicacea**

*Berteroa incana* hoary alyssum

 *Descurainia* sp*.* tansymustard

 *Lepidium* sp*.* pepperweed

 *Physaria reediana (*syn*. Lesquerella alpina)* Reed’s twinpod

 *Schoenocrambe linifolia* basin mustard/flaxleaf plainsmustard

 *Sisymbrium altissimum* tumble mustard *BD*

 *Stanleya* sp*.* prince’s plume

**Cactaceae**

 *Opuntia polyacantha* prickly pear cactus

**Caryophyllaceae**

*Arenaria hookeri* Hooker’s sandwort

 *Minuartia nuttallii (*syn*. Arenaria)* Nuttall’ssandwort

**Elagnaceae**

*Elaeagnus commutata* silverberry *BD*

**Euphorbiaceae**

*Euphorbia brachycera* horned spurge *BD*

**Fabaceae**

*Astragalus bisulcatus* two grooved milkvetch

 *Robust plant two ft. tall, purple flowers*

 *Astragalus gilviflorus* var*. purpureus* Dubois milkvetch

 *Mat former, 3 leaflets above flower, flowers lavender*

 *Astragalus tenellus* pulse milkvetch

 *1 foot tall, little white flowers, pendant fruit on a small stipe*

 *Astragalus laxmannii* var*. robustior (*syn*. A. adsurgens)* prairie milkvetch

 *purple flower,parking lot*

 *Astragalus simplicifolius*

 *erect fruits, tight mat*

 *Astragalus* sp*.* “rhizome”

 *no flowers or fruits*

 *Astragalus* sp*.* (itty bitty)

 *tiny pubescent leaflets, 1-2mm, prostrate, long peduncle, 4cm long*

 *Astragalus chamaeleuce* cicada milkvetch

 *5 to 9 leaflets, few magenta flowers, big inflated pod, green pod with reddish brown streaks*

 *Astragalus* sp*.*

 *15 leaflets, dense spike*

 *Astragulus* sp*.*

 *purple flowers open raceme greenish leaves, 7 leaflets, long peduncle, 5—6 cm, axil inflor.*

 *Hedysarum boreale* Utah sweetvetch *BD*

 *Lupinus argenteus* bald banner/silvery lupine

 *Lupinus pusillus* tiny/rusty lupine

 *Melilotus officinalis* yellow sweetclover

 *Oxytropis besseyi* Bessey’s crazy weed/locoweed

 *Oxytropis campestris* cream flowered crazy weed/field locoweed

 *Psoralidium lanceolatum* lemon scurf pea

 *Vicia americana* American vetch *SR*

**Grossulariaceae**

*Ribes cereum* wax currant

**Linaceae**

*Linum lewisii* Lewis/prairie flax

**Loasaceae**

 *Mentzelia* sp.comet flower/blazing star *BD*

***Malvacaeae***

*Sphaeralcea coccinea* scarlet globe mallow

**Onagraceae**

*Oenothera suffrutescens**(*syn*. Gaura coccinea)* butterfly weed/scarlet beeblossom

 *Oenothera caespitosa* desert/tufted evening primrose

 *Oenothera pallida* red stemmed/pale evening primrose

***Orobanchaceae (Castilleja* formerly in the Scrophulariaceae family*)***

 *Castilleja angustifolia* var*. dubia (*syn*. C. chromosa)* northwestern Indian paintbrush

 *Castilleja* sp*.* Indian paintbrush

 *Orbanche fasciculata* clustered broomrape

**Plantaginaceae (*Penstemon* formerly in the Scrophuariaceae family)**

*Penstemon angustifolius* narrowleaf penstemon/beardtongue

*Penstemon eriantherus* fuzzytongue penstemon

 *Penstemon laricifolius* larchleaf penstemon

**Polemoniaceae**

 *Ipomopsis spicata* spiked ipomopsis

 *Lianthus pungens* granite prickly phlox/sagebrush gilia

 *Phlox hoodia* ssp*. muscoides (*syn*. P. muscoides)* moss/musk phlox

**Polygonaceae**

*Eriogonum brevicaule* shortstem buckwheat

 *Eriogonum* sp*.* buckwheat *BD*

**Ranunculaceae**

 *Delphinium nuttallianum* twolobe larkspur

**Salicaceae**

*Populus angustifolia narrowleaf cottonwood BD*

 **Santalaceae**

 *Comandra umbellata* ssp*. pallida* pale bastard toadflax

**Sarcobataceae (formerly Chenopodiaceae family)**

*Sarcobatus vermiculatus* greasewood

 **MONOCOTS**

**Alliaceae**

 *Allium textile* onion

**Cyperaceae**

*Carex filifolia* threadleaf sedge

**Melanthiaceae**

*Zigadenus venenosus* meadow deathcamas *BD*

**Poacaeae**

*Achnatherum contractum* contracted ricegrass(Charmaine)

 *Achnatherum hymenoides* Indian rice grass

 *Agropyron cristatum* crested wheatgrass

 *Bromus tectorum* cheatgrass

 *Bouteloua gracilis* blue grama

 *Elymus cinereus* basin wildrye

 *Elymus elymoides* bottlebrush squirreltail

 *Pseudoroegneria spicata* bluebunch wheat grass

 *Hesperostipa comata* needleandthread/spear grass

 *Koeleria macrantha* prairie junegrass

 *Poa secunda* Sandberg bluegrass

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