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Robert I. Lonard

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Sammie L. Sides

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ANNOTATED CHECKLIST OF THE FLOWERING PLANTS OF SOUTH PADRE ISLAND, TEXAS

ROBERT I. LONARD, FRANK W. JUDD AND SAMMIE L. SIDES

Department of Biology, Pan American University, Edinburg, Texas 78539

ABSTRACT. This study catalogues the flowering plants of South Padre Island, Texas. A total of 207 species in 47 families is listed. The abundance and ecological distribution of each taxon are noted. Comparisons are made with the flora of Mustang Island, Texas. Ninety-three species, 96 genera and 36 families are common to both islands. Three families, Compositae, Gramineae and Leguminosae, contain large shares of the total number of species on both islands. Apparently, much of the floral diversity is due to the presence of a large number of species that are represented by small populations.

Padre Island is a barrier island that extends approximately 182 km along the gulf coast of Texas (Fig. 1). It varies in width from 450 m to 5 km and is separated from the Texas mainland by the Laguna Madre. Padre Island National Seashore occupies most of the northern and central portion of the island and extends southward to the Port Mansfield Cut. That portion of Padre Island which extends from the Port Mansfield Cut to the Brazos-Santiago Pass at Port Isabel is referred to as South Padre Island (Judd 1976). Except for small holdings at the northern and southern ends, South Padre Island is under private ownership and subject to "development." Presently development is limited to the southernmost 8 km of the island, but Park Road 100 extends 11 km further north and provides access roads to the beach.

Study of the flora and vegetation of the Texas-Mexico barrier island system is limited and most investigation has been directed to North Padre Island and Mustang Island (Jones et al. 1961; Whitehouse 1962; Gould and Box 1965; Jones 1975; Rabalais 1975; Gillespie 1976). Poggie (1963) studied the vegetation of the foreshore zone of the barrier island off the coast of the Mexican state of Vera Cruz. Gonzalez-Medrano (1972) listed common species located around the Laguna Madre in Tamaulipas, including species typically found on the coastal dunes. Selander et al. (1962) included a brief discussion of the

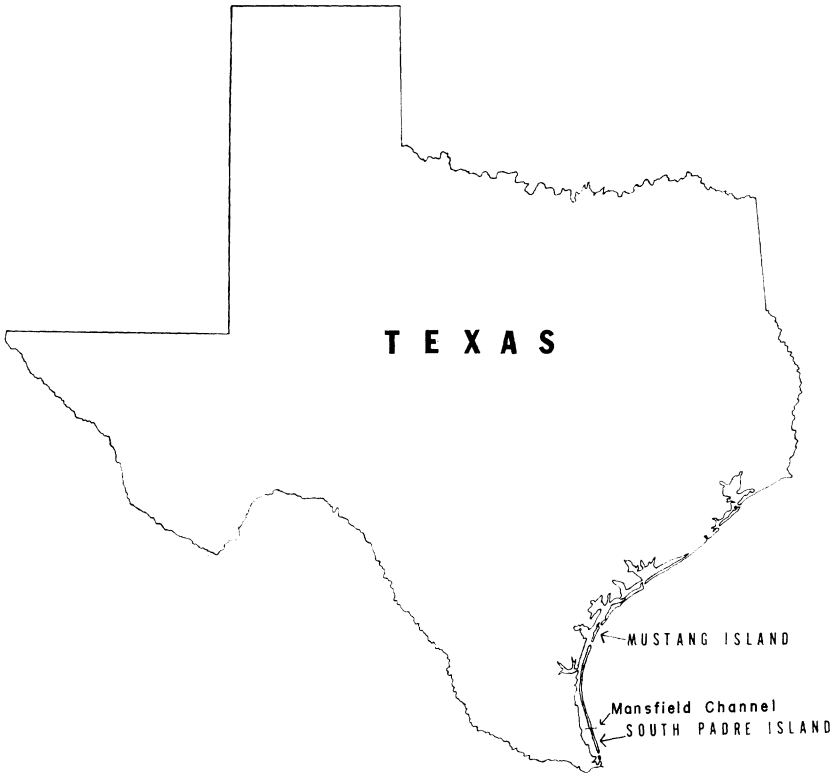


Fig. 1. Map of South Padre Island and Mustang Island showing the study areas.

ecology of the Tamaulipan barrier island and listed characteristic species for certain vegetation zones.

Papers devoted to studies of the flora and vegetation of the barrier island system from the Port Mansfield Cut to the mouth of the Rio Grande are those of Clover (1937), Dahl et al. (1974) and Judd et al. (1977). Clover (1937) provided a list of 48 species from Boca Chica and separated these according to occurrence in vegetation of beach, shifting dunes, permanent dunes and salt flats. Dahl et al. (1974) studied the stabilization of foredunes using native species and provided species lists that do not distinguish between North and South Padre Island. Judd et al. (1977) studied the vegetation of South Padre Island in relation to topography, but provided lists only for species encountered in vegetation transects. Thus, there has been no comprehensive study of the flora of South Padre Island.

Recently, Gillespie (1976) reported on the flora of Mustang Island

(immediately north of Padre Island). She listed 178 species of flowering plants. The purposes of this paper are to provide an inventory of vascular flora of South Padre Island and to compare the floras of Mustang and South Padre Islands.

METHODS. Data reported here are based primarily on collections made by Lonard from 1969 through 1976. Supplementary data was provided by specimens collected by others that are deposited in the Pan American University Herbarium. With few exceptions, nomenclature follows Correll and Johnston (1970) or Gould (1975). Families are arranged alphabetically. Abbreviations are used to refer to vegetation zones or sites recognized in Judd et al. (1977). A category, disturbed sites, has been added to include areas altered by highway construction, parks and building construction. Abbreviations and vegetation zones and sites are:

- FS — Foreshore
- BS — Backshore
- PD — Primary dunes
- SDVF — Secondary dunes and vegetated flats
- TF — Tidal flats
- WO — Washovers
- DS — Disturbed sites

A complete set of voucher specimens is deposited in the Pan American University Herbarium (PAUH). Duplicate specimens have been distributed to HPC, TAES, WIN, OSMC and NLUC (*Index Herbariorum I* 1974).

Cultivated plants are included in the checklist if they appear to persist without care or show indications of spreading from cultivated sites. An asterisk (*) denotes species present on South Padre Island, but not reported from Mustang Island by Gillespie (1976).

ANNOTATED CHECKLIST OF THE FLORA ANGIOSPERMAE DICOTYLEDONEAE

AIZOACEAE

***Sesuvium erectum** Correll. Sea purslane. infrequent; DS along roadsides.

S. portulacastrum L. Sea purslane, cenicilla. abundant; BS and WO. An important pioneer species.

AMARANTHACEAE

***Amaranthus greggii** Wats. Pigweed. infrequent; DS near the P.A.U. Marine Lab.

A. palmeri Wats. Palmer amaranth. infrequent; DS near the P.A.U. Marine Lab.

Philoxerus vermicularis (L.) R. Br. Silverhead. occasional; SDVF and TF around margins of shallow pools.

Tidestromia lanuginosa (Nutt.) Standl. var. **lanuginosa**. Woolly tidestromia, espanta vaqueros. infrequent; DS in dunes near Brazos-Santiago Pass.

*ANACARDIACEAE

***Schinus terebinthifolius** Raddi. Brazilian pepper. rare; DS appears to be spreading at one location.

*APOCYNACEAE

***Carissa macrocarpa** (Eckl.) A. DC. Natal plum. rare; DS persisting around abandoned buildings.

***Nerium oleander** L. Common oleander, laurel rosa. rare; DS persisting along roadsides and around abandoned buildings.

ASCLEPIADACEAE

Asclepias oenotheroides Cham. & Schlecht. Green milkweed, hierba de zizotes. infrequent; DS and SDVF.

*AVICENNIACEAE

***Avicennia germinans** (L.) L. Black mangrove, mangle blanco. locally abundant; TF in heavy clay near the Queen Isabella Causeway.

BATIDACEAE

Batis maritima L. Saltwort, vidrillos. occasional to locally abundant; WO and TF.

BORAGINACEAE

Heliotropium curassavicum L. var. **curassavicum**. Seaside heliotrope, cola de mico. infrequent; DS near Brazos-Santiago Pass.

CACTACEAE

Opuntia lindheimeri Engelm. var. **lehmanni** L. Benson. Texas pricklypear, nopal. occasional, SDVF.

***O. macrorhiza** Engelm. var. **macrorhiza** vel aff. Plains pricklypear. occasional; SDVF.

CHENOPODIACEAE

***Atriplex arenaria** Nutt. Saltbush, quelite. infrequent; DS near roadsides.

***A. matamorensis** A. Nelson. infrequent; DS and TF near Queen Isabella Causeway.

Salicornia bigelovii Torr. Glasswort, saladilla. locally abundant; TF and WO.

***S. virginica** L. Glasswort, saladilla. locally abundant; TF and WO.

Suaeda linearis (Ell.) Moq. Seablite. locally abundant; TF and WO.

COMPOSITAE

Ambrosia psilostachya DC. Western ragweed. occasional; DS and SDVF.

Aphanostephus skirrhobasis (DC.) Trel. var. **thallasius** Shinnery. infrequent; DS and SDVF.

***Aster subulatus** Michx. var. **ligulatus** Shinnery. Aster, hierba del marrano. infrequent; DS.

Borrchia frutescens (L.) DC. Sea ox-eye daisy. locally abundant; SDVF and TF on heavy clay.

***Cirsium texanum** Buckl. Thistle. rare; DS.

***Clappia suaedaefolia** Gray. rare; DS on heavy clay.

***Conyza canadensis** (L.) Cronq. var. **glabrata** (Gray) Cronq. Horseweed. occasional; DS.

***Coreopsis nuccensis** Heller. Tickseed. rare; DS near roads.

***Croptilon divaricatum** (Nutt.) Raf. var. **hirtellum** (Shinnery) Shinnery. Scratch daisy. infrequent; DS near roads.

Erigeron myrionactis Small. Corpus Christi fleabane. occasional; DS and SDVF.

Eupatorium betonicifolium Mill. Mist flower. occasional; SDVF on the margins of wet depressions.

Flaveria oppositifolia (DC.) Rydb. Longleaf flaveria. infrequent; SDVF in late autumn.

***Florestina tripteris** DC. infrequent; DS in parks.

Gaillardia pulchella Foug. Indian blanket. frequent to locally abundant; DS and SDVF.

***Gnaphalium pensilvanicum** Willd. Cudweed. rare; DS in trailer park lawns.

***Helianthus annuus** L. subsp. **texanus** Heiser. Common sunflower, mirasol. infrequent; DS.

Heterotheca subaxillaris (Lam.) Britt. & Rusby. Camphor weed. locally abundant; DS and SDVF.

Iva angustifolia DC. Marsh elder. infrequent; DS and SDVF in wet impressions.

Machaeranthera phyllocephala (DC.) Shinn. Camphor daisy. locally abundant; SDVF and TF in wet depressions.

Palafoxia texana DC. var. **ambigua** Shinn. occasional; DS.

***Parthenium hysterophorus** L. False ragweed, cicutilla, occasional; DS.

Pluchea purpurascens (Sw.) DC. Canela. rare; wet depressions.

***Pyrrhopappus multicaulis** DC. False dandelion. occasional; DS near Coast Guard Station.

***Ratibida columnaris** (Sims.) D. Don. Mexican hat. rare; DS on the margins of roadsides.

R. peduncularis (T. & G.) Barnh. Mexican hat. infrequent; SDVF.

***Solidago sempervirens** L. var. **mexicana** (L.) Fern. Goldenrod. frequent; SDVF.

***Sonchus asper** (L.) Hill. Sowthistle, achicoria dulce. rare; DS.

Verbesina encelioides (Cav.) Gray. Cowpen daisy. infrequent; DS.

CONVOLVULACEAE

Ipomoea pes-caprae (L.) Sweet var. **emarginata** Hallier f. Railroad vine. occasional; BS and PD.

I. stolonifera (Cyr.) Gmel. Beach morning glory. A dominant taxon; BS and PD.

CRUCIFERAE

Cakile fusiformis Greene. Sea rocket. rare; BS and DS.

***C. geniculata** (Robins.) Millsp. Sea rocket. rare; BS and DS.

***Lepidium austrinum** Small. Peppergrass. rare; DS.

L. virginicum L. var. **medium** (Greene) C. L. Hitchc. Peppergrass, lentejilla. rare; DS.

***Lesquerella lasiocarpa** (Gray) Wats. var. **berlandieri** (Gray) Pays. Bladderpod. rare; DS edge of roadside near Brazos-Santiago Pass.

EUPHORBIACEAE

Croton capitatus Michx. var. **lindheimeri** (Engelm. & Gray) Muell. Arg. Woolly-croton. rare; DS.

C. punctatus Jacq. Beach tea, hierba del jabali. frequent; PD, WO.

Euphorbia ammannioides H.B.K. Spurge. infrequent; SDVF.

***E. cordifolia** Ell. Spurge. infrequent; SDVF.

***E. cyathophora** Murr. Wild poinsettia. rare; DS, probably escaped from cultivation near Brazos-Santiago Pass.

***E. hypericifolia** L. Spurge. rare; DS.

GENTIANACEAE

Eustoma exaltatum (L.) G. Don. infrequent; SDVF in damp sand.

Sabatia arenicola Greenm. rare; SDVF in damp sand.

LEGUMINOSAE

***Acacia smallii** Isley. Huisache. very rare; DS in Isla Blanca Park.

***Astragalus nuttallianus** DC. Milkvetch. rare; DS in lawns near Brazos-Santiago Pass.

***Baptisia leucophaea** Nutt. var. **laevicaulis** Canby. Wild indigo. occasional; SDVF in the spring.

***Canavalia maritima** (Aubl.) Thou. Swordbean. infrequent; SDVF and DS Isla Blanca Park.

Cassia fasciculata Michx. var. **ferrisiae** (Britt.) Turner. Partridge pea. frequent; PD and SDVF.

***Crotalaria incana** L. Chipilin. very rare; SDVF.

Dalea emarginata (T. & G.) Shinners. occasional; DS near roads.

***D. lanata** Spreng. Woolly dalea. rare; SDVF.

***Desmanthus virgatus** (L.) Willd. var. **depressus** (Willd.) B. L. Turner. infrequent; DS near the P.A.U. Marine Lab.

Indigofera miniata Ort. Indigo. occasional; DS.

Leucaena leucocephala (Lam.) de Wit. Popinac. rare; DS near Brazos-Santiago Pass.

***L. pulverulenta** (Schlecht.) Benth. Tepeguaje. rare; DS cultivated in trailer park.

***Medicago polymorpha** L. var. **vulgaris** (Benth.) Shinners. Bur-clover. occasional; DS in lawns in Isla Blanca Park.

***Melilotus albus** Lam. White sweetclover, hubam. occasional; DS in lawns in Isla Blanca Park.

M. indicus (L.) All. Sourclover, alfalfilla. occasional; DS.

Mimosa strigillosa T. & G. Powderpuff, vergonzosa. infrequent; DS in packed sand and in lawns.

***Prosopis reptans** Benth. var. **cinerascens** (Gray) Burkhardt. Screwbean, tornillo. occasional; TF in heavy clays.

***P. glandulosa** Torr. var. **glandulosa**. Honey mesquite. rare; DS in Isla Blanca Park.

Psoralea rhombifolia T. & G. rare; DS in Isla Blanca Park.

Rhynchosia americana (Mill.) C. Metz. Snoutbean. infrequent; DS and SDVF.

R. minima (L.) DC. Snoutbean. infrequent; DS and SDVF.

***Schrankia latidens** (Small) K. Schum. Sensitive brier. rare; DS and SDVF.

Sesbania macrocarpa Muhl. Bequilla. rare; DS in heavy clay near the Queen Isabella Causeway.

Sophora tomentosa L. Eve's necklace, yellow sophora. infrequent; SDVF.

***Vigna luteola** (Jacq.) Benth. rare; SDVF near Port Mansfield Pass and Isla Blanca Park.

LINACEAE

Linum alatum (Small) Winkler. Wild flax. infrequent; SDVF.

LOGANIACEAE

Polyppremum procumbens L. infrequent; SDVF.

*LYTHRACEAE

***Lythrum californicum** T. & G. Hierba del cancer. infrequent; SDVF in wet depressions.

L. lanceolatum Ell. Loosestrife. infrequent; SDVF in wet depressions.

MALVACEAE

***Malvastrum americanum** (L.) Torrey. Malva loca. very rare; DS near the P.A.U. Marine Lab.

NYCTAGINACEAE

Boerhaavia coccinea Mill. Scarlet spiderling. infrequent; DS on the edges of sidewalks and roadsides.

***Bougainvillea glabra** Choisy. Bougainvillea. rare; DS often persisting around vacant buildings.

***Mirabilis albida** (Walt.) Heimerl. var. **lata** Shinners. Four-o'clock. rare; DS in packed sand near Brazos-Santiago Pass.

ONAGRACEAE

***Calylophus australis** Towner and Raven. Evening primrose. infrequent; SDVF.

***C. drummondianus** Spach. subsp. **berlandieri** (Spach.) Towner & Raven. infrequent; SDVF.

Oenothera drummondii Hook. Beach evening primrose. occasional; SDVF, PD and DS.

***O. engelmannii** (Small) Munz. Evening primrose. rare; DS.

O. laciniata Hill. Cut-leaved evening primrose. rare; DS edges of roadsides and sidewalks.

O. speciosa Nutt. Showy primrose, amapola del campo. rare; DS.

PAPAVERACEAE

Argemone albiflora Hornmen. subsp. **texana** G. Ownbey. White prickly poppy. rare; DS in packed sand near Brazos-Santiago Pass.

*PASSIFLORACEAE

***Passiflora foetida** L. var. **gossypifolia** (Hamilt.) Mast. Passion flower, corona de Cristo. rare; specimen collected by Davis in 1969 but not seen recently.

PLANTAGINACEAE

***Plantago rhodosperma** Dcne. Plantain. rare; DS in packed sand near Brazos-Santiago Pass.

PLUMBAGINACEAE

Limonium nashii Small. Sea lavender. occasional; TF and WO.

*POLYGALACEAE

***Polygala alba** Nutt. Milkwort. occasional; SDVF.

POLYGONACEAE

***Rumex chrysocarpus** Moris. Dock, amamastla. rare; DS.

PORTULACACEAE

Portulaca mundula I. M. Johnst. Chisme. rare; DS.

P. oleracea L. Purslane, verdolaga. rare; DS.

P. umbraticola H.B.K. Purslane. rare; DS.

PRIMULACEAE

Samolus ebracteatus H.B.K. Brookweed. occasional; SDVF on the margins of pools.

*RANUNCULACEAE

***Clematis drummondii** T. & G. Old man's beard, barbas de chivato. rare; DS on fences and around vacant buildings.

RUBIACEAE

**Hedyotis bosicii* DC. Bluet. infrequent; SDVF.

**H. nigricans* (Lam.) Fosb. Bluet. infrequent; SDVF.

Richardia brasiliensis Gomes. rare; DS in packed sands near roadsides and sidewalks.

SCROPHULARIACEAE

**Agalinus heterophylla* (Nutt.) Small. Prairie agalinus. infrequent; SDVF.

**A. maritima* (Raf.) Raf. var. *maritima*. infrequent; SDVF.

**A. strictifolia* (Benth.) Penn. occasional; SDVF.

Bacopa monneri (L.) Wettst. Water-hyssop. rare; SDVF on the margins of pools.

**Buchnera floridana* Gand. Bluehearts. rare; SDVF.

Castilleja indivisa Engelm. Indian paintbrush. very rare; DS in a swale near the Coast Guard Station.

Stemodia tomentosa (Mill.) Greenm. & Thomps. Woolly stemodia. occasional; SDVF.

SOLANACEAE

Lycium carolinianum Walt. var. *quadrifidum* (Dun.) C. L. Hitchc. Wolfberry. rare; TF and DS in heavy clay near the Queen Isabella Causeway.

**Margaranthus solanaceus* Schlect. rare; DS.

**Nicotiana repanda* Willd. Fiddle-leaf tobacco. rare; DS in shaded sites near buildings.

Physalis viscosa L. var. *spathulaefolia* (Torr.) Gray. Ground cherry. infrequent to occasional; DS and SDVF.

Solanum elaeagnifolium Cav. Silver-leaf nightshade, trompillo. infrequent; DS.

**S. triquetrum* Cav. Texas nightshade, hierba mora. rare; DS.

TAMARICACEAE

**Tamarix aphylla* Karst. Athel tamarisk. rare; DS persisting around vacant buildings.

UMBELLIFERAE

Apium leptophyllum (Pers.) F. V. Muell. rare; DS in shaded sites in lawns.

Hydrocotyle bonariensis Lam. Water pennywort, sombreroillo. DS and SDVF several small colonies in wet depressions in Andy Bowie Park; also in lawns.

VERBENACEAE

Phyla incisa Small. Texas frog-fruit. rare; DS.

P. nodiflora (L.) Greene. var. *reptans* (H.B.K.) Moldenke. Common frog-fruit. rare; DS on the edges of sidewalks and roadsides.

**Verbena bipinnatifida* Nutt. Small-flowered verbena. rare; DS in packed sand in Isla Blanca Park.

V. halei Small. Texas vervain. rare; DS.

VITACEAE

Cissus incisa (Nutt.) Des Moul. Cow-itch. rare; DS on fences in trailer park sites.

ZYGOPHYLLACEAE

Tribulus terrestris L. Goathead, cadillo. rare; DS packed sand and lawns.

MONOCOTYLEDONEAE

COMMELINACEAE

Commelina erecta L. var. *angustifolia* (Michx.) Fern. Dayflower, Hierba del pollo. infrequent; SDVF.

CYPERACEAE

- ***Cladium jamaicense** Crantz. Saw-grass. very rare; SDVF one small stand in a wet depression.
- ***Cyperus ovalaris** (Michx.) Torr. infrequent; DS near the P.A.U. Marine Lab.
 - ***C. polystachyos** Rottb. var. **texensis** (Torr.) Fern. rare; DS.
 - ***C. rotundus** L. Nut-grass, tulillo. infrequent; DS.
 - ***C. uniflorus** T. & G. rare; DS.
- Dichromena colorata** (L.) Hitchc. White-topped umbrella sedge. locally abundant; SDVF.
- Eleocharis montevidensis** Kunth. Spikesedge. infrequent; SDVF.
 - ***E. obtusa** (Willd.) Schult. Spikesedge. infrequent; SDVF.
- ***Fimbristylis castanea** (Michx.) Vahl. Esparto mulato. locally abundant; WO and SDVF.
- ***Fuirena simplex** Vahl. Umbrella grass. frequent; SDVF in wet depressions
- Scirpus americanus** Pers. var. **longispicatus** Britt. Three-square bulrush, infrequent to locally abundant; SDVF and TF.

GRAMINEAE

- Andropogon glomeratus** (Walt.) B.S.P. Bushy bluestem. locally abundant; SDVF.
- ***Aristida longespica** Poir. Slimspike three-awn. rare; DS near roads.
- ***Arundo donax** L. Giant reed, carrizo. Cultivated near Brazos-Santiago Pass.
- Bothriochloa saccharoides** (Sw.) Rydb. var. **longipaniculata** (Gould) Gould. Longspike silver bluestem. infrequent; DS on the margins of roadsides.
- Cenchrus ciliaris** L. Buffel grass. infrequent; DS.
 - ***C. echinatus** L. Southern sandbur, cadillo. infrequent; DS.
 - ***C. incertus** M. A. Curtis. Common sandbur. infrequent; DS.
- Chloris cucullata** Bisch. Hooded windmill grass. infrequent; DS on the margins of roadsides.
 - ***C. gayana** Kunth. Rhodesgrass. rare; DS.
 - ***C. subdolichostachya** C. Muell. Shortspike windmill grass. infrequent; DS.
 - ***C. pluriflora** (Fourn.) Clayton. (**Trichloris pluriflora** Fourn.) Four-flowered trichloris. infrequent; DS.
- Cynodon dactylon** (L.) Pers. Bermuda grass, pata de gallo. infrequent; DS.
- Dactyloctenium aegyptium** (L.) Beauv. Durban crowfoot. infrequent; DS.
- ***Dichantherium angustifolium** (Ell.) Gould. (Inc. **Panicum portoricense** Hamilt.) infrequent; SDVF.
- ***Dichanthium annulatum** Stapf. Kleberg bluestem. infrequent; DS on the margins of roadsides.
- ***Digitaria adscendens** (H.B.K.) Henr. Southern crabgrass. occasional; DS.
 - ***D. diversiflora** Swall. Tropical crabgrass. occasional; DS.
 - ***D. texana** Hitchc. Crabgrass, occasional; DS.
- ***Distichlis spicata** (L.) Greene var. **spicata**. Seashore saltgrass. infrequent; TF.
- ***Echinochloa colonum** (L.) Link. Junglerice. infrequent; DS.
- ***Eleusine indica** (L.) Gaertn. Goosegrass. infrequent; DS.
- Eragrostis oxylepis** (Torr.) Torr. Red lovegrass. occasional to frequent; SDVF and DS.
 - ***E. silveana** Swall. Silver lovegrass. rare; SDVF and on the leeward slopes of PD.

- ***E. spectabilis** (Pursh) Steud. Purple lovegrass. infrequent; SDVF in depressions and on the leeward slopes of PD.
- ***Eriochloa punctata** (L.) Desv. Louisiana cupgrass. infrequent; DS in damp sand near roadsides.
- ***Leptochloa nealleyi** Vasey. Neally sprangletop. infrequent; DS clay sites near the Queen Isabella Causeway.
- Monanthochloe littoralis** Engelm. Shoregrass. locally abundant; TF and WO.
- ***Panicum amarum** Ell. Bitter panicum. occasional; BS and WO in small stands in foredunes and margins of washovers.
- ***P. hallii** Vasey. Halls panicum. infrequent; DS.
- ***P. maximum** Jacq. Guinea grass, infrequent; DS.
- ***P. reptans** L. Sprawling panicum. infrequent; DS.
- ***P. texanum** Buckl. Texas panicum. infrequent; DS.
- Paspalum monostachyum** Vasey. Gulfdune paspalum. occasional to frequent; SDVF.
- P. setaceum** Michx. Thin paspalum. infrequent; SDVF.
- ***P. vaginatum** Swartz. Seashore paspalum. infrequent; SDVF on the margins of shallow pools.
- ***Phragmites australis** (Cav.) Trin. ex Steudel. Common reed, canoto. occasional in small stands; SDVF.
- ***Polypogon monspeliensis** (L.) Desf. rare; SDVF on the margin of a shallow pool near Port Mansfield Pass.
- Schizachyrium scoparium** (Michx.) Nash var. **littoralis** (Nash) Gould. Seacoast bluestem. the dominant taxon; SDVF.
- ***Setaria adhaerens** (Forsk.) Choiv. infrequent; DS.
- ***S. leucopila** (Scribn. & Merr.) K. Schum. Plains bristlegrass. infrequent; DS.
- Sorghum halepense** (L.) Pers. Johnsongrass. infrequent; DS.
- ***Spartina alterniflora** Loıs. Smooth cordgrass. occasional in dense stands; TF near the Queen Isabella Causeway.
- S. patens** (Ait.) Muhl. Marshhay cordgrass. frequent; TF and SDVF.
- S. spartinae** (Trin.) Hitchc. Gulf cordgrass, sacahuista. rare in depressions, but abundant on mainland; SDVF.
- ***Sporobolus cryptandrus** (Torr.) Gray. Sand dropseed. infrequent; DS.
- ***S. pyramidatus** (Lam.) Hitchc. Whorled dropseed. occasional; DS in packed sand and heavy clay.
- ***S. tharpaii** Hitchc. Padre Island dropseed. occasional; SDVF.
- S. virginicus** (L.) Kunth. Coastal dropseed. locally abundant; BS, TF and WO.
- ***S. wrightii** Scribn. Big sacaton. infrequent; SDVF.
- Stenotaphrum secundatum** (Walt.) Kuntze. St. Augustine grass. DS cultivated lawn grass.
- ***Trichoneura elegans** Swall. Silveus grass. rare; DS in depression near Brazos-Santiago Pass.
- ***Triplasis purpurea** (Walt.) Chapm. Purple sandgrass. infrequent; SDVF.
- Uniola paniculata** L. Sea oats, espiga del mar. widespread and locally dominant; BS, PD, SDVF and WO.
- ***Vaseyochloa multinervosa** (Vasey) Hitchc. Texas grass. rare; not seen by us, but collected by Floyd Waller (2337); SDVF.

IRIDACEAE

Sisyrinchium biforme Bickn. Blue-eyed grass. infrequent; SDVF.

*LILIACEAE

***Nothoscordum bivalve** (L.) Britt. Crow poison. rare; DS in heavy clays in Isla Blanca Park.

*ORCHIDACEAE

***Spiranthes vernalis** Engelm. & Gray. Spring ladies' tresses. rare; SDVF.

*RUPPIACEAE

***Ruppia maritima** L. Widgeon grass. rare; SDVF in shallow, brackish pools near Port Mansfield Pass.

*TYPHACEAE

***Typha domingensis** Pers. Cat-tail, tule. rare; SDVF wet sites in Andy Bowie and Isla Blanca Parks.

We suggest that one should use a large measure of caution in drawing conclusions from comparisons of floras because of possible differing amounts of time devoted to surveying the floras and because of possible biases introduced by differing taxonomic orientations and expertise. Nevertheless, the number of species, genera and families is quite similar on Mustang Island and South Padre Island. Gillespie (1976) lists 178 species representing 148 genera of 50 families for Mustang Island. This compares to 207 species representing 151 genera of 47 families on South Padre Island. As expected, similarity of the floras increases with inclusiveness of taxonomic category. However, the floristic composition differs considerably despite the close geographic proximity and similarity of aspect, substrate and climate. We calculated coefficients of community (CC) using the equation $CC = 2c/a + b \times 100$, where c = number of taxa shared and a and b represent the number of taxa from Mustang Island and South Padre Island. The number of species, genera and families common to both are 93, 96 and 36, respectively. CC for species = 48.3%, genera = 64.2% and families = 74.2%. Much of the diversity is apparently due to the presence of ruderal weedy species and to the patchy occurrence of other invading species. All but one of the 53 genera limited to Mustang Island are represented by a single species. On South Padre Island 49 of the 55 exclusive genera are represented by a single species. Eleven of the 14 exclusive families on Mustang Island are represented by a single species and on South Padre Island 9 of 11 exclusive families are represented by a single species.

Three families, Compositae, Gramineae and Leguminosae, contain large shares of the total number of species on both islands. On Mustang Island they contain 42.1% of all species (Compositae 24, Gramineae

25, Leguminosae 26) and on South Padre Island they account for 51.7% of the total flora (Compositae 28, Gramineae 54, Leguminosae 25).

Species common to abundant on South Padre Island but not reported from Mustang Island (Gillespie 1976) include *Polygala alba*, *Fimbristylis castanea*, *Fuirena simplex* and *Panicum amarum*. Judd et al. (1977) found *P. alba* and *F. castanea* on three island-wide transects. *Fimbristylis castanea* had a high importance value on two transects; thus, its absence from the flora of Mustang Island is surprising. *Panicum amarum* was an important species in the Backshore and Primary Dune zones. *Fuirena simplex* occurred in only one of the island-wide transects, but it was an important member of vegetation of the Tidal Flats zone (Judd et al 1977). Perhaps these species also occur on Mustang Island, but have not been reported because of their patchy distribution.

In conclusion, it appears that much of the floral diversity on Texas barrier islands is due to the presence of a large number of species that are represented by small populations. Probably the number of invading species waxes and wanes considerably from year to year depending on prevailing environmental conditions.

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