

| TABLE 25. COMPOSITE PALYNOMORPH LISTS FOR CRETACEOUS AND PALEOCENE STRATA, SAN JUAN BASIN | | | |
|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------|------------------------------------------------------------------|-----------------------------------------------------------|
| Cretaceous - Campanian | Lowermost Paleocene | Cretaceous - Campanian (Cont.) | Lowermost Paleocene (Cont.) |
| <i>Abietinaepollenites</i> | | <i>Momipites sanjuanensis</i> | <i>Momipites sanjuanensis</i> |
| | <i>Abietinaepollenites</i> sp. (<i>Podocarpus northrupi</i>) | <i>Momipites</i> sp. | <i>Momipites</i> sp. |
| | <i>Abietinaepollenites</i> sp. (<i>Podocarpus sellowiformis</i>) | | <i>Momipites tenuipolis</i> |
| <i>Acanthotriletes</i> | | <i>Monocolopollenites?</i> sp. | |
| <i>Accuratipollis</i> | | <i>Monoporopollenites</i> sp. | |
| | <i>Acer striata</i> | <i>Monosulcites perspinosus</i> | |
| <i>Aequitriradites</i> | | <i>Monosulcites</i> sp. | |
| <i>Aequitriradites spinulosus</i> | | <i>Naviculites marginatus</i> | |
| Algal cysts | Algal cysts | <i>Neoraistrickia</i> sp. | |
| | <i>Alisporites bilateralis</i> | <i>Nyssapollenites albertensis</i> | |
| <i>Alnipollenites</i> 4 pored | | | <i>Nyssapollenites explanatus</i> |
| <i>Alnus</i> 3 pored | | <i>Nyssapollenites</i> sp. | <i>Nyssapollenites</i> sp. |
| <i>Alsophilidites</i> sp. | | | <i>Nyssa puercoensis</i> |
| <i>Appendicisporites</i> spp. | | <i>Osmundacidites</i> | |
| <i>Aquilapollenites attenuatus</i> | | <i>Osmundacidites stanleyi</i> | |
| <i>Aquilapollenites delicatus</i> | | | <i>Osmundacidites wellmannii</i> |
| <i>Aquilapollenites quadriobus</i> | | | <i>Ovoidites ligneolus</i> |
| <i>Aquilapollenites senonicus</i> | | | <i>Ovoidites</i> sp. |
| <i>Aquilapollenites</i> sp. | <i>Aquilapollenites</i> spp. | | " <i>Palaeoisoetes</i> " sp. |
| <i>Aquilapollenites trialatus</i> , var. <i>uniformis</i> | | <i>Palaeoisoetes subengelmannii</i> | |
| <i>Aquilapollenites turbidus</i> | | <i>Paliurus triplicatus</i> | " <i>Paliurus</i> " <i>triplicatus</i> |
| | <i>Araucariacites australis</i> | | <i>Pandanidites</i> |
| <i>Araucariacites</i> sp. | | | <i>Pandanidites radicus</i> |
| <i>Arecipites columellus</i> | | <i>Pandanidites typicus</i> | <i>Pandanidites typicus</i> |
| <i>Arecipites microreticulatus</i> | | <i>Pediastrum</i> | |
| <i>Arecipites reticulatus</i> | <i>Arecipites reticulatus</i> | <i>Periporopollenites</i> sp. | <i>Periporopollenites</i> sp. |
| <i>Arecipites</i> | <i>Arecipites</i> sp. | <i>Perotriletes cubensis</i> | |
| <i>Azolla circinata</i> | | <i>Phaseolidites stanleyi</i> | |
| <i>Azolla cretacea</i> | <i>Azolla cretacea</i> | <i>Pityosporites constrictus</i> | |
| <i>Azolla</i> microspores | | <i>Pityosporites</i> spp. | <i>Pityosporites</i> sp. |
| | <i>Azolla</i> cf. <i>A. schopfi</i> | <i>Pityosporites typicus</i> | |
| <i>Balmesporites</i> | | <i>Plicapollis?</i> | |
| | <i>Biretisporites</i> sp. | | <i>Podocarpus sellowiformis</i> |
| Bisaccate conifer pollen | | | <i>Podocarpus</i> sp. |
| | <i>Bombacacipites nacimientoensis</i> | <i>Pollenites?</i> sp. | |
| <i>Botryococcus</i> | | <i>Polypodioidites</i> spp. | <i>Polypodioidites</i> spp. |
| | <i>Brevicolporites colpella</i> | <i>Polypodiisporites amplius</i> | |
| <i>Camazonosporites ambigens</i> | | <i>Polypodiisporites</i> sp. | |
| <i>Camazonosporites</i> spp. | | | <i>Polypodiisporonites</i> sp. |
| | <i>Cercidiphyllites</i> sp. | <i>Pristinuspollenites</i> | |
| <i>Chenopodiopsis</i> sp. | <i>Chenopodiopsis</i> sp. | <i>Pseudoplicapollis?</i> | |
| <i>Cicatricosisporites</i> sp. | <i>Cicatricosisporites</i> spp. | <i>Pseudoplicapollis newmanii</i> | |
| <i>Cingulatisporites lancei</i> | | <i>Pseudoschizaea</i> | |
| | <i>Classopollis</i> sp. | <i>Pseudoplicapollis</i> sp. | |
| <i>Clavatipollenites</i> | | | <i>Psilastephanocolpites</i> sp. |
| cf. <i>Concavisporites verrucosus</i> | | <i>Pterospermopsis</i> | |
| <i>Conferisulcites knowltoni</i> | | | <i>Quadrupollenites</i> sp. |
| <i>Corollina</i> | | <i>Quadrupollis krempii</i> | |
| <i>Corollina torosa</i> | <i>Corollina torosa</i> (incl. monads and tetrads) | <i>Quercus explanata</i> | " <i>Quercus</i> " <i>explanata</i> |
| | <i>Cupanieidites</i> aff. <i>C. major</i> | | <i>Quercus</i> sp. |
| <i>Cupanieidites</i> aff. <i>C. reticularis</i> | <i>Cupanieidites</i> cf. <i>C. reticularis</i> | cf. <i>Radialetes costatus</i> | |
| | <i>Cupanieidites</i> sp. | | <i>Rectosulcites latus</i> |
| <i>Cupuliferoidaeipollenites minor</i> | | <i>Reticuloidosporites pseudomurii</i> | |
| <i>Cupuliferoidaeipollenites minutus</i> | <i>Cupuliferoidaeipollenites minutus</i> | <i>Retitriletes</i> sp. (" <i>Lycopodiumsporites</i> ") | |
| <i>Cupuliferoidaeipollenites</i> spp. | | <i>Rhoipites</i> sp. | |
| <i>Cyathidites minor</i> | <i>Cyathidites minor</i> | <i>Rugbivesiculites</i> | |
| <i>Cyathidites</i> spp. | | | <i>Salix</i> sp. |
| <i>Cycadopites fragilis</i> | <i>Cycadopites fragilis</i> | <i>Schizosporis parvus</i> | <i>Schizosporis parvus</i> |
| <i>Cycadopites</i> sp. | | <i>Sphagnum</i> sp. | |
| | <i>Cyrilla minima</i> | <i>Sporites?</i> sp. | |
| | <i>Deltoidospora</i> spp. | <i>Stereisporites</i> spp. | <i>Stereisporites</i> spp. |
| Dinoflagellates | | <i>Subtriporopollenites</i> sp. | |
| <i>Dyadonapites reticulatus</i> | <i>Dyadonapites reticulatus</i> | | <i>Syncolporites minimus</i> |
| <i>Echinatisporis</i> | <i>Echinatisporis</i> sp. | cf. <i>Taurosporites</i> | |
| <i>Echinatisporis varispinosus</i> | | <i>Taxodiaceaeipollenites hiatus</i> | <i>Taxodiaceaeipollenites hiatus</i> |
| <i>Engelhardtia</i> type | <i>Engelhardtia</i> type | <i>Taxodiaceaeipollenites</i> | <i>Taxodiaceaeipollenites</i> sp. |
| <i>Ephedra multicostata</i> | | | <i>Taxodiaceaeipollenites vacuipites</i> |
| <i>Ephedra</i> sp. cf. <i>E. voluta</i> | cf. <i>Ephedra voluta</i> | <i>Tetracolpites</i> | <i>Tetracolpites</i> 2 sp. |
| <i>Ephedripites</i> sp. | | <i>Triaepollenites</i> sp. (<i>Tilia wodehousei</i>) | |
| | <i>Equisetosporites lajwantis</i> | cf. <i>Tilia wodehousei</i> | |
| <i>Equisetosporites parallel striae</i> | | <i>Torisporis</i> sp. | |
| <i>Equisetosporites spiral</i> | | <i>Trichopeltites</i> | |
| <i>Equisetosporites</i> sp. | <i>Equisetosporites</i> spp. | <i>Tricolpites anguloluminosus</i> | <i>Tricolpites anguloluminosus</i> |
| <i>Erdmannipollis cretaceus</i> | | | <i>Tricolpites foveolate</i> |
| <i>Erdmannipollis</i> sp. | <i>Ericaceoipollenites</i> sp. | <i>Tricolpites hians</i> | |
| | | <i>Tricolpites interangulus</i> Newman | |
| <i>Eucommiidites minor</i> | | <i>Tricolpites microreticulatus</i> | |
| <i>Eucommiidites</i> sp. | | <i>Tricolpites reticulatus</i> | |
| <i>Extratropopollenites</i> sp. | | <i>Tricolpites</i> sp. A | |
| Fern spores not abundant | | | <i>Tricolpites scabrata</i> |
| <i>Foraminisporis</i> sp. | <i>Foraminisporis</i> spp. | <i>Tricolpites</i> spp. | <i>Tricolpites</i> spp. |
| <i>Foraminisporis undulatus</i> | | | <i>Tricolpites vulgaris</i> |
| <i>Foveotriletes scrobicularis</i> | | | |
| <i>Foveosporites</i> sp. Cf. <i>F. canalis</i> | | <i>Tricolpopollenites</i> sp. | |
| <i>Fraxinoipollenites variabilis</i> | <i>Fraxinoipollenites variabilis</i> | <i>Tricolpopollenites</i> sp. (<i>Quercus explanata</i>) | |
| <i>Ghoshispora</i> spp. | <i>Ghoshispora</i> sp. | <i>Tricolporites</i> sp. | |
| | <i>Gleicheniidites senonicus</i> | <i>Tricolporites traversei</i> | |
| <i>Gleicheniidites</i> spp. | | | <i>Tricolporites rhomboides</i> |
| <i>Granabivesiculites</i> sp. | | | <i>Tricolporites</i> sp. |
| <i>Gunnera microreticulata</i> | | <i>Triletes?</i> sp. | |
| <i>Hystriospheres</i> | <i>Hystriospheres</i> & dinoflagellates | <i>Triplanosporites</i> sp. | |
| <i>Ilexpollenites compactus</i> | | <i>Triporetetes novomexicanum</i> | <i>Triporetetes novomexicanum</i> |
| <i>Interporopollenites</i> | | | <i>Triporetetes simplex</i> |
| <i>Inaperturopollenites</i> cf. <i>I. hiatus</i> | | <i>Triporopollenites rugatus</i> | |
| <i>Inaperturotetradites scabratus</i> | | | <i>Triporopollenites plektosus</i> |
| <i>Klukisporites</i> | | | cf. <i>Triporopollenites rugatus</i> |
| <i>Kurtzpollis</i> | | <i>Triporopollenites</i> spp. | <i>Triporopollenites</i> sp. |
| <i>Kurtzpollis trispissatus</i> | | | <i>Triporopollenites</i> sp. (cf. <i>Casiaromodotes</i>) |
| <i>Kuylisporites</i> sp. | | <i>Triporopollenites tectus</i> | <i>Triporopollenites tectus</i> |
| | <i>Laevigatosporites haardtii</i> | <i>Trudopollis meekeri</i> | |
| <i>Laevigatosporites</i> spp. | <i>Laevigatosporites</i> sp. | <i>Trudopollis</i> sp. | |
| Large fern tetrad | | <i>Tschudypollis many, large</i> | <i>Tschudypollis</i> (reworked) |
| <i>Lecaniella</i> | | <i>Tschudypollis retusus</i> | |
| <i>Leptolepidites major</i> | | <i>Tschudypollis</i> sp. | |
| <i>Liliacidites</i> | | <i>Tschudypollis thalmanii</i> | <i>Tschudypollis thalmanii</i> (reworked) |
| <i>Liliacidites complexus</i> | | <i>Tsugaepollenites</i> sp. | |
| <i>Liliacidites hyalaciniatus</i> | | <i>Ulmipollenites</i> | |
| <i>Liliacidites leei</i> | <i>Liliacidites leei</i> | <i>Ulmipollenites krempii</i> | <i>Ulmipollenites</i> spp. |
| <i>Liliacidites reticulata</i> | | <i>Ulmipollenites</i> 3, 4 pored | <i>Ulmipollenites</i> 3 and 4 pored. |
| <i>Liliacidites</i> sp. | <i>Liliacidites</i> sp. | <i>Ulmoidipites</i> spp. 3 and 4 pored smooth to verrucate forms | |
| <i>Liliacidites</i> sp. cf. <i>L. complexus</i> | | <i>Ulmoidipites tricostratus</i> | <i>Ulmoidipites tricostratus</i> |
| <i>Liquidambarpollenites</i> sp. | | | Unclassified bisaccates |
| <i>Loranthacites</i> | | | Unclassified triletes |
| <i>Lycopodiacidites kuepperi</i> | | | Unclassified triporates |
| <i>Lycopodiacidites</i> spp. | | unidentified acritarchs | |
| <i>Lycopodiumsporites</i> spp. | | unidentified dinoflagellate cysts | |
| <i>Microfoveolatosporis</i> | | unidentified pollen tetrad | |
| <i>Microfoveolatosporis canaliculatus</i> | | unidentified trilete spores | |
| <i>Microreticulatisporites</i> sp. | | cf. <i>Vitis affluens</i> | <i>Vitis?</i> <i>affluens</i> |
| cf. <i>Minorpollis</i> | | <i>Zonalapollenites</i> | |
| <i>Momipites inaequalis</i> | <i>Momipites inaequalis</i> | <i>Zivisporis novomexicanum</i> | <i>Zivisporis novomexicanum</i> |
| | | <i>Zivisporis</i> sp. | <i>Zivisporis</i> sp. |

Notes: Cretaceous strata include Kirtland, Fruitland, and Kirtland-Fruitland Formations undivided; Paleocene strata include the Ojo Alamo Sandstone and in places the Paleocene uppermost part of the Kirtland and (or) Fruitland Formation. Palynomorphs listed are from Tables 23 and 24.