

TABLE 23. COMPARISON OF PALYNOMORPHS FROM KIRTLAND AND FRUITLAND FORMATIONS FROM ALL S.J. BASIN LOCALITIES!

Fruitland Formation	Kirtland Formation	Fruitland Formation (continued)	Kirtland Formation (continued)
	<i>Abietinaepollenites</i>	<i>Liquidambarpollenites</i> sp.	
<i>Acanthotriletes</i>			<i>Loranthacites</i>
<i>Accuratipollis</i>		<i>Lycopodiacidites kuepperi</i>	
<i>Aequitriradites</i>	<i>Aequitriradites</i>	<i>Lycopodiacidites</i> spp.	<i>Lycopodiacidites</i>
<i>Aequitriradites spinulosus</i>		<i>Lycopodiumsporites</i> spp.	<i>Lycopodiumsporites</i>
Algal cysts		<i>Microfoveolatosporis</i>	<i>Microfoveolatosporis</i>
	<i>Alnipollinites</i>	<i>Microfoveolatosporis canaliculatus</i>	
<i>Alnipollenites</i> 4 pored		<i>Microreticulatisporites</i> sp.	
<i>Alnus</i> 3 pored		cf. <i>Minorpollis</i>	
<i>Alsophildites</i> sp.			<i>Momipites inaequalis</i>
<i>Appendicisporites</i> spp.	<i>Appendicisporites</i> sp.	<i>Momipites sanjuanensis</i>	<i>Momipites sanjuanensis</i>
<i>Aquila</i> 4 E		<i>Momipites</i> sp.	
<i>Aquila</i> 4 E		<i>Monocolopollenites?</i> sp.	
<i>Aquila</i> 18		<i>Monoporopollenites</i> sp.	
<i>Aquila</i> 36 C		<i>Monosulcites perspinosus</i>	
<i>Aquila</i> 42	<i>Aquilapollenites</i> 3 sp.	<i>Monosulcites</i> sp.	<i>Monosulcites</i>
			? <i>Monosulcites perspinosus</i>
<i>Aquilapollenites attenuatus</i>		<i>Navisulcites marginatus</i>	
<i>Aquilapollenites delicatus</i>		<i>Neoraistrickia</i> sp.	
<i>Aquilapollenites quadrilobus</i>	<i>Aquilapollenites quadrilobus</i>		<i>Nyssapollenites albertensis</i>
<i>Aquilapollenites senonicus</i>		<i>Nyssapollenites</i> sp.	<i>Nyssapollenites</i> sp.
<i>Aquilapollenites trilobatus, var uniformis</i>			<i>Osmundacidites</i>
<i>Aquilapollenites turbidus</i>			<i>Osmundacidites stanleyi</i>
<i>Araucariacites</i> sp.			" <i>Palaeisoetes</i> " sp.
<i>Arecipites</i>			<i>Palaeisoetes subengelmannii</i>
	<i>Arecipites columellas</i>	<i>Paliurus triplicatus</i>	
<i>Arecipites microreticulatus</i>	<i>Arecipites microreticulatus</i>		<i>Pandaniidites</i>
<i>Arecipites reticulatus</i>	<i>Arecipites reticulatus</i>		<i>Pandaniidites typicus</i>
	<i>Azolla</i>	<i>Pediastrum</i>	
	<i>Azolla circinata</i>	<i>Periporopollenites</i> sp.	<i>Periporopollenites</i>
	<i>Azolla cretacea</i> (relatively abundant)	<i>Peroirletes cubensis</i>	
	<i>Azolla</i> microspores	<i>Phaseolidites stanleyi</i>	
<i>Balmesporites</i>			<i>Pityosporites constrictus</i>
<i>Bisaccate conifer pollen</i>	<i>Bisaccate conifer</i>		<i>Pityosporites</i> spp.
<i>Botryococcus</i>			<i>Pityosporites typicus</i>
<i>Camarozonosporites ambigens</i>		<i>Plicapollis?</i>	
<i>Camarozonosporites</i> spp.	<i>Camarozonosporites</i>	<i>Pollenites?</i> sp.	
	<i>Chenopodiipollis</i> sp.	<i>Polypodiidites</i> spp.	
<i>Cicatricosisporites</i>	<i>Cicatricosisporites</i> sp.	<i>Polypodiisporites amplius</i>	
	<i>Cingulatisporites lancei</i>	<i>Polypodiisporites</i> sp.	
<i>Clavatipollenites</i>		<i>Pristinuspollenites</i>	
cf. <i>Concavisporites verrucosus</i>		<i>Pseudoplicapollis?</i>	<i>Pseudoplicapollis</i>
<i>Conferisulcites knowltoni</i>		<i>Pseudoplicapollis newmanii</i>	
<i>Corollina</i>	<i>Corollina</i> sp.	<i>Pseudoplicapollis</i> sp.	
<i>Corollina torosa</i>	<i>Corollina torosa</i>		<i>Pseudoschizaea</i>
	<i>Cupaniidites</i> sp.		<i>Pterospermopsis</i>
<i>Cupaniedites</i> aff. <i>C. reticularis</i>		<i>Quadripollis krempii</i>	
	<i>Cupuliferoidaepollenites minor</i>		<i>Quercus explanata</i>
<i>Cupuliferoidaepollenites minutus</i>		cf. <i>Radialetes costatus</i>	
<i>Cupuliferoidaepollenites</i> spp.		<i>Reticuloidosporites pseudomurii</i>	
<i>Cyathidites minor</i>	<i>Cyathidites minor</i>		<i>Retiriletes</i> sp. ("Lycopodiumsporites")
	<i>Cyathidites</i> spp.	<i>Rhoipites</i> sp.	
	<i>Cycadopites fragillius</i>	<i>Rugbivesiculites</i>	<i>Rugbivesiculites</i>
	<i>Cycadopites</i> sp.		<i>Schizosporis parvus</i>
<i>Cyrella mimima</i>		<i>Sphagnum</i> sp.	
<i>Dinoflagellates</i> very few	<i>Dinoflagellate</i>	<i>Sporites?</i> sp. A	
	<i>Dyadonapites reticulatus</i>	<i>Stereisporites</i> spp.	
<i>Echinatisporis</i>	<i>Echinatisporis</i>	<i>Subtriporopollenites</i> sp.	
<i>Echinatisporis varispinosus</i>		cf. <i>Tauroscopites</i>	
<i>Engelhardtia</i> type		<i>Taxodiaceaeapollenites</i>	<i>Taxodiaceaeapollenites</i>
	<i>Ephedra multicostata</i>	<i>Taxodiaceaeapollenites hiatus</i>	<i>Taxodiaceaeapollenites hiatus</i>
<i>Ephedra</i> sp. cf. <i>E. voluta</i>		<i>Tetracopites</i>	
<i>Ephedripites</i> sp. D		<i>Tilia wodehousei</i>	<i>Tilia wodehousei</i>
	<i>Equisetosporites</i> 5	<i>Toroisporis</i> sp.	
<i>Equisetosporites parallel striae</i>		<i>Trichopeltinites</i>	
<i>Equisetosporites spiral</i>		<i>Tricolpites anguloluminosus</i>	
	<i>Erdmanipollis cretaceus</i>	<i>Tricolpites hians</i>	
<i>Erdmannipollis</i> sp.		<i>Tricolpites interangulus</i> Newman	<i>Tricolpites interangulus</i>
<i>Eucommiidites minor</i>			<i>Tricolpites microreticulatus</i>
<i>Eucommiidites</i> sp.		<i>Tricolpites reticulatus</i>	<i>Tricolpites reticulatus</i>
<i>Extratropopollenites</i> sp.		<i>Tricolpites</i> spp.	<i>Tricolpites</i> sp.
Fern spores not abundant		<i>Tricolpites</i> sp. A	
<i>Foraminisporis</i> sp.	<i>Foraminisporis</i>		<i>Tricolpites vulgaris</i>
	<i>Foraminisporis undulatus</i>	<i>Tricolpopollinites</i> sp.	
<i>Foveotriletes scrobicularis</i>		<i>Tricolpopollinites</i> sp. A	
<i>Foveosporites</i> sp. cf. <i>F. canalis</i>		<i>Tricolpopollinites</i> sp. B	
	<i>Fraxinopollenites variabilis</i>	<i>Tricolpopollinites</i> sp. C	
<i>Ghoshispora</i> spp.	<i>Ghoshispora</i> sp.	<i>Tricolpopollenites</i> sp. ( <i>Quercus explanata</i> )	
<i>Gleicheniidites</i>	<i>Gleicheniidites</i>		<i>Tricolporites rhomboides</i>
<i>Granabivesiculites</i> sp.		<i>Tricolporites</i> sp.	
	<i>Gunnera</i>	<i>Tricolporites traversei</i>	
	<i>Gunnera microreticulata</i>	<i>Triletes?</i> sp. A	
<i>Hystrichospheres</i> very few		<i>Triplanosporites</i> sp.	
<i>Ilexpollenites</i>			<i>Triporetetes novomexicanum</i>
	<i>Ilexpollenites compactus</i>	<i>Triporopollenites rugatus</i>	
	<i>Inaperturopollenites</i> sp.	<i>Triporopollenites</i> spp.	
<i>Inaperturopollenites</i> cf. <i>I. hiatus</i>		<i>Triporopollenites tectus</i>	
	<i>Inaperturotetradites scabratus</i>	<i>Tnudopollis</i>	
<i>Interporopollenites</i>		<i>Tnudopollis meekeri</i>	
<i>Klukisporites</i>	<i>Klukisporites</i>	<i>Tschudypollis retusus</i>	<i>Tschudypollis retusus</i>
<i>Klukisporites</i> spp.		<i>Tschudypollis</i> many, large	<i>Tschudypollis</i> spp. (many)
<i>Kurtzipites</i>		<i>Tschudypollis thalmanni</i>	<i>Tschudypollis thalmanni</i>
<i>Kurtzipites trispissatus</i>	<i>Kurtzipites trispissatus</i>		<i>Tsugaepollenites</i> sp.
<i>Laevigatosporites</i> spp.	<i>Laevigatosporites</i> spp.	<i>Ulmipollenites</i>	<i>Ulmipollenites</i>
	Larger fern tetrad	<i>Ulmipollenites</i> 3, 4 pored	
<i>Lecaniella</i>		<i>Ulmipollenites krempii</i>	<i>Ulmipollenites krempii</i>
<i>Leptolepidites major</i>			<i>Ulmipollenites</i> sp.
<i>Liliacidites complexus</i>	<i>Liliacidites complexus</i>	<i>Ulmoidipites tricostatus</i>	("Ulmoidipites") <i>tricostatus</i>
<i>Liliacidites hyalaciniatus</i>	<i>Liliacidites hyalaciniatus?</i>		<i>Ulmoidipites</i> spp. 3 and 4 pored smooth to verrucate forms
<i>Liliacidites leei</i>	<i>Liliacidites leei</i>	<i>Vitis?</i> <i>affluens</i> (C3-r 43)	cf. <i>Vitis affluens</i>
	<i>Liliacidites reticulata</i>	<i>Zivisporis novomexicanum</i>	
<i>Liliacidites</i> sp.	<i>Liliacidites</i> sp.	<i>Zivisporis</i> sp.	<i>Zivisporis</i>
	<i>Liliacidites</i> sp. cf. <i>L. complexus</i>	<i>Zonalapollenites</i> sp.	

Note: Palynomorphs listed are from Tables 21 and 22; Fruitland-Kirtland palynomorph zonation shown on Figure 64.