

Investigation of Source Material for the Proposed Jurassic – Cretaceous/ Tertiary Angiosperm Biomarker Biscadinane, in Parallel to Known Angiosperm Lineage Biomarker Oleanane

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Examination of different sediments show the abundance of the molecular fossils appears dependent on the depositional environment. The channel clayballs presumably from surrounding flood plain terraces are more oxidized than other facies, have a complex signature, and possibly have a two stage diagenesis. They also have the highest oleanane index, and des-A oleanane to diterpenoids ratio, but these may not be comparable to the other facies because of high oxidation. Comparison between the less oxidized levee and backswamp facies, show higher levels of angiosperm input in the levee, and higher levels of conifer input in the backswamp. In summary, angiosperms are found in all facies, input and dominance over conifers appears highest in the clayballs with conifer input highest in the backswamp.

	Levee	Backswamp	Clayballs
Oleanane index	2.17	2.08	4.49
Des-A Oleanane index	43.13	46.30	43.48
Fichtelites index	1.60	2.13	0.578
Beyerane index	1.05	1.32	0.830
Des-A-Oleanane to Fichtelites ratio	2.10	1.15	8.24
Des-A-Oleanane to Beyerane ratio	1.85	0.71	5.73
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High, intermediate, low