PALYNOLOGY OF FOUR ALASKA OUTCROP SAMPLES

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Four outcrop samples examined for palynology yielded rich and diverse assemblages of terrestrial origin. The estimated ages received all seem appropriate for the content of these populations, which are summarized as follows:

29KIM (Strata next to DFS)

Richly abundant pollen assemblage containing material common to modern environments, no older than Miocene. Observed content:

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| bisaccate gymnosperm pollen - indet., abundant |
| Tsugaepollenites |
| Piceaepollenites |
| Alnipollenites verus - common |
| Psilatricolpites sp. - prolate, indet. |
| Exesisporites sp. |
| Abietineaepollenites |
| polyporate fungal spores |
| Betula |
| Foveosporites sp. - triangular, thin, very finely foveolate |
| Ulmipollenites krempii |
| Retitriletes sp. |
| Platycaryapollenites stellatus |
| Laevigatosporites sp. |

38KIM (Coal Creek Camp Slate Creek)

Similar to the population of 29KIM, but less diverse and slightly less well preserved. Probable Miocene age.

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| bisaccate gymnosperm pollen - indet., common |
| Tsugaepollenites |
| Alnipollenites verus - common |
| fungal spores, small, indet. |
| Betula - fairly ciommon |
| Foveosporites sp. |
| Deltoidospora sp |
| Ulmipollenites krempii |
| Diervilla? sp. |
| linear septate fungal hypha |

39KIM

Very rich, diverse population, again similar to 29KIM and 38KIM. Fungal material is common, suggesting likely humid environmental conditions. Notable is the presence, although rare, of the extinct pollen species *Diervilla echinata*, which was first described from Oligocene material in British Columbia (Piel, 1971). It is known to range into the Miocene, and a Miocene age seems probable for this sample.

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| bisaccate gymnosperm pollen - indet., common |
| Tsugaepollenites - common |
| Converrucosisporites? sp. - indet. |
| Abietineaepollenites |
| Laevigatosporites sp. - numerous |
| Alnipollenites verus - common |
| Deltoidospora sp |
| Retitriletes sp. |
| linear septate fungal hypha - numerous |
| Pinuspollenites sp. |
| Betula - numerous |
| Osmundacidites wellmanii |
| Extrapunctatosporites sp. |
| Laricoidites magnus |
| Polypodiisporonites sp. |
| Taxodiaceaepollenites hiatus |
| fungal fruiting body - small |
| Exesisporites sp. |
| Diervilla echinata |
| Piceaepollenites |
| tricellate fungal, huge, large central cell, elliptical |
| tricolpate pollen - spherical, tectate, microfoveolate |
| Undulatisporites sp. |

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This sample contains abundant numbers of the extant algal zygospore *Mougeotia* (thoroughly documented by Zippi, 1998). This entity is found in freshwater environments, and its abundance suggests a swamp or marsh-type setting. Another freshwater algal zygospore, *Ovoidites ligneolus*, is present as well. Also common are the Sphagnum-related spores of genus *Stereisporites*; this type of moss again is found in marsh or bog settings today. A Pliocene age is probable.

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| bisaccate gymnosperm pollen - indet., abundant |
| Laevigatosporites sp. |
| Retitriletes sp. numerous |
| Stereisporites sp. abundant |
| Betula - common |
| Tsugaepollenites - abundant |
| Alnipollenites verus |
| Abietineaepollenites |
| Laricoidites magnus |
| Converrucosisporites? sp. |
| Mougeotia - abundant |
| Diporisporites sp. |
| Nupharipollenites? sp. |
| Corsinipollenites oculusnoctis |
| Ovoidites ligneolus |

REFERENCES

Piel, K. M. 1971. Palynology of Oligocene sediments from central British Columbia. Canadian. Journal of Botany, 49: 1885-1920.

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