



## Дорогие коллеги!

Следующее заседание нашего семинара состоится **20 октября, в четверг, в 15.00**. Будет представлен доклад «The role of inaperturate pollen in the evolutionary transition from a distal monosulcus in the basal angiosperms to the equatorial apertures of the eudicots» (Michael Zavada). Обратите внимание на тезисы на второй странице pdf-версии этого объявления. Подключиться можно по ссылке: <https://zoom.us/j/9104791704> Идентификатор конференции: **910 479 1704**. Пожалуйста, в своем профиле в zoom указывайте фамилию и имя.

Позднее осенью мы надеемся прослушать следующие доклады: James Doyle «Integrating Cretaceous fossils into the phylogeny of living angiosperms: the case of the now-relict family Chloranthaceae», А.В.Храмов «Эволюция насекомоопыления глазами палеоэнтомолога», Е.В.Карасев, А.Г. Сенников «Признаки педогенеза и ризолиты из терминальной перми центральной России», Sun Ge «Recent advance on study of Early Cretaceous angiosperms and their bearing strata from eastern Northeast China, with discussion on the correlation to those from South Primorye, Russia».

Мы будем рады всех вновь увидеть на нашем семинаре!

С наилучшими пожеланиями, Наталья Завьялова

P.S. Записи прошедших семинаров смотрите на

<https://www.youtube.com/channel/UCzMV6ES2n8mHFYn6qV4qFxA>

## **The role of inaperturate pollen in the evolutionary transition from a distal monosulcus in the basal angiosperms to the equatorial apertures of the eudicots**

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Speculation on the evolutionary trends in the basal angiosperms invariably takes a parsimonious approach by deriving eudicot equatorial triaperturate pollen directly from the distal monosulcate pollen types of the basal angiosperms. The primary basis for accepting this hypothesis is this scenario is the most parsimonious. There are three major aspects that confound our understanding of the monosulcate - tricolpate transition. First, the selective forces in the evolution of reproductive structures in plants (and animals) are more reasonably assumed to be sexual selection. Sexual selection is defined by Safran (2013) “as the result of the differential reproductive success that arises from competition for mates and access to fertilizations”. A common scenario is, males compete for females, and females choose males. Males develop strategies to exclude other males and gain access to all the available females (maximizing genetically related offspring), and females develop strategies to assess male vigor and permit acceptable genetically diverse males to mate (maximizing offspring variability in an uncertain world). Second, morphological and developmental evolutionary trends in the basal angiosperms suggest that this morphological transition was not a direct transition, but through an inaperturate / omniaperturate intermediate. This is supported by a majority of the basal angiosperms exhibiting in their ordinal clades an evolutionary transition from the monosulcate pollen type to the inaperturate / omniaperturate pollen types, not the triaperturate. Third, a known feature of the inaperturate / omniaperturate pollen of many of the basal angiosperms is the pollen is not durable when acetolyzed. This suggests these pollen types may not survive fossilization and post depositional diagenesis leaving somewhat of a historical gap in the pollen record. There is a dearth of fossilized inaperturate / omniaperturate pollen in the fossil record that can be attributed to the basal angiosperms. The data suggest the most reasonable hypothesis is that equatorial triaperturate pollen is derived from the monosulcate type via the inaperturate / omniaperturate pollen types.