Paläo-Art

Mit seiner Detailgenauigkeit läßt Michael Wachtler Millionen Jahre alte vergangene Welten wieder auferstehen. Heutige Landschaften können wir in allen Einzelheiten fotografieren. Was früher geschah können wir nur vermuten. Hier hilft, dass Michael Wachtler ein Leben lang weltweit versteinerte Pflanzen mit großer Sachkenntnis barg und die vielen isolierten Teile zu einem sinnvollen Ganzen zusammensetzte.
Erst so wurden 300 Millionen Jahre alte Baumfarne und Riesenbärlappbäume wieder in all ihren Nuancen lebendig, genauso wie er die später kommenden Nadelbäume, Cycadeen und Ginkgos, aber auch die ersten Blütenpflanzen mit Pinsel und Farben zum Leben erweckte.
Niemanden sonst gelang dies in solcher Präzision wie Michael Wachtler.

Anbei eine kleine Auswahl zum bestellen als Poster.

Sollten Sie als Museum oder für eine Ausstellung Interesse haben, dass Michael Wachtler auch ihre vergangenen Landschaften zum Leben erweckt kontaktieren sie ihn.

Michael Wachtler beim Bergen eines 300 Millionen Jahre alten Baumfarnwedels und Rekonstruktion

Rekonstruktion der ältesten bekannten Ginkgos, welche vor über 200 Millionen Jahren die Erde besiedelten.

Gallery

Eine mitteldevonische Landschaft mit den ältesten Nacktsamer-vorläufern (Lindlar, 390 million years ago)

Michael Wachtler versucht vergangene Welten für jedermann verständlich zu machen.
"Pflanzen sind faszinierende und komplexe Organismen. Ohne Pflanzen gebe es auch keine Tiere auf dieser Welt. Wie sie sich entwickelten ist heute noch eine große Herausforderung"

Eine Flora-Gemeinschaft aus dem Unterkarbon der Alpen (vor etwa 330 Millionen Jahren). Häufig war ein primitiver Calamites-Schachtelhalm, ***Archaeocalamites radiatus*** (1) mit vielfach gegabelten Blattnadeln. Bei den Farnen dominierten ***Adiantites flabellifolium*** (2), ***Rhodeopteridium leptofoliatum*** (3), sowie ***Praecallipteridium parvifolium*** (4). Mittlerweile erreichten auch verschiedene Bärlappbäume (***Lepdidodendron*** (5,6), ***Sigillaria*** (7) einen nur wenige Millionen Jahre andauernden, später nie mehr erreichten Riesenwuchs.

Eine Flora-Gemeinschaft aus dem frühen Oberkarbon der Alpen (vor 315 Millionen Jahren). Häufig war der Bärlappbaum ***Lepidodendron alpinus*** (1) mit seinen wuchtigen Fruchtzapfen. Auch der Sporenschachtelhalm ***Calamites steinachii*** (2) war weit verbreitet (3). Prägend war der Baumfarn ***Cyatheites rummeri*** (3). Weiters kamen niedrig wachsende Farne wie ***Cyclopteris pichleri*** (4), ***Callipteridium wachtlerae*** (5), ***Dicksonites eggerbergii*** (6), der Laubfarn-Vorläufer ***Platyceritesl haeckeli*** (7), sowie der Danaea-Vorfahre ***Danaeites kerneri*** vor (8).

Early Permian (Kungurian, about 280 mio years), Tregiovo, Northern Italy

Within a very short time the arctic climate changed again to subtropical. Left lower part the seed ferns ***Autunia*** and ***Lepidopteris meyeri,*** after the fern ***Sphenopteris battistii***. A variety of gymnosperm-families suddenly developed. In the middle is visible first the most archaic cycad-progenitor ***Wachtleropteris valentinii*** with male and female cones, after that a more evolved ***Taeniopteris nonensis*** and ***Macrotaeniopteris tridentina***. On the right is a *Zamia*-cycad ***Nilssonia perneri***. Upper part in the middle left: A branchlet of the Abietaceae ***Majonica ambrosii*** with a male cone. Left upper part: The giant horsetail ***Neocalamites tregio-***

Late Permian (Wuchiapingian, about 260 mio years), Ariche - Valli del Pasubio, Northern Italy

In the Upper Permian many plants, especially the gymnosperms were fully evolved. Left below sprout the cycad ***Macrotaeniopteris wachtleri*** with male cones. Followed by the interesting cycad ***Pernerina pasubi*** with megasporophylls, after that the *Zamia*-like cycad ***Nilssonia brandtii*** with a male cone and its two seeded female cones. On the right side is an ***Angiopterites murchisonii*** fern. In the left upper part grows the last Calamitaceae recorded in Earth-history ***Neocalamites benckeae***. In the rich conifer assemblage dominates the Araucariaceae ***Ortiseia zanettii*** with female and male cones. After that on the right side a twig with female cones and decaying seed scales of the fir-

Early Permian broad-leaved fruits

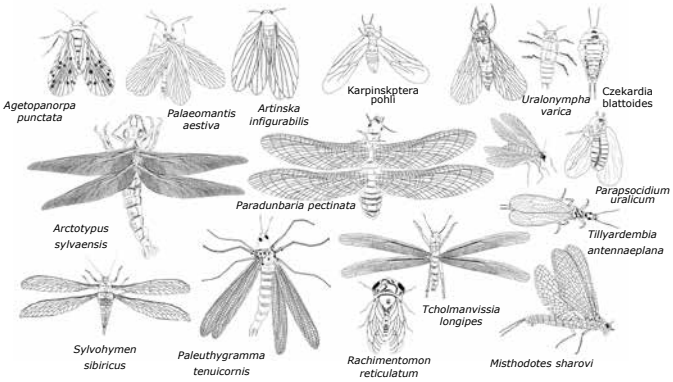
Left: samaras from ash ancestor *Sadovnikovia belemnoides,* maples (*Sylvella alata*) and elms (*Matvéeva perneri*); **middle:** birches (*Samzalesskya triquetra*), oak-acorns (*Craspedosperma bardaeanum);* **right:** stonefruits (*Bardocarpus aliger, Parvunucleus dammannii*) and nuts (*Nucifructa primaeva)*. Several Early Permian insects are flying in the background and document a mutual symbiosis.

Early Permian oaks (***Psygmophyllum expansum***-leaves and ***Craspedosperma bardaeanum-***acorns)

Twig with leaves and acorns of the Quercus-ancestor *Craspedosperma bardaeanum.* In the middle is recognizable the beetle *Sylvacoleus sharovi,* in the upper left side the scorpionfly *Palaeomantis aestiva.*

Permian Insects and Angiosperms

Several flowers and insects from the Early Permian Fore-Urals



Detailgetreue Vorzeichnungen

Early-Middle Triassic lycopod community (Anisian, about 245 mio years), Piz da Peres

The interesting club-moss plant assemblage: Left the enigmatic ***Eocyclotes alexawachtleri,*** followed by the low growing parented ***Lepacyclotes bechstaedtii,*** behind the Isoetaceae ***Isoetites brandneri***. In the middle ***Sigillcampeia nana,*** one of the last representatives of the *Sigillaria*-trees, on the right the arborescent ***Lycopia dezanchei***, probably the last descendant of the *Lepidodendron* club mosses and the Selaginellaceae ***Selaginellites leonardii.***

Early-Middle Triassic fern-community (Anisian, about 245 mio years), Piz da Peres

A variegated tropical till subtropical flora with many different fern-families dominates: Left the ***Anomopteris mougeotii,*** than follow the two Osmundaceae ***Neuropteridium elegans*** and ***Neuropteridium voltzii.*** After that grow the oldest *Danaea*-fern recorded ***Danaeopsis dolomitica*** and right the most archaic *Lindsaea*-fern ***Wachtleria nobilis***. In the background, on the left the two tree ferns ***Gordonopteris lorigae*** and ***Ladinopteris kandutschii*** flourish.

Early-Middle Triassic gymnosperm-community (Anisian, about 245 mio years), Piz da Peres

The gymnosperms with cycads and conifers were widespread. The ginkgoales were missing: Left two fertile female cycas ***Bjuvia olangensis***; in the middle another parented cycas ***Taeniopteris simplex***, right the Zamiaceae ancestors ***Nilssonia primitiva*** and ***Pseudoctenis braiesensis*** with female cones, shed seed scales and male cones. In the background left grows the conifer ***Voltzia rietscheli*** and on the right side the *Glyptostrobus* progenitor ***Alpia anisica.***

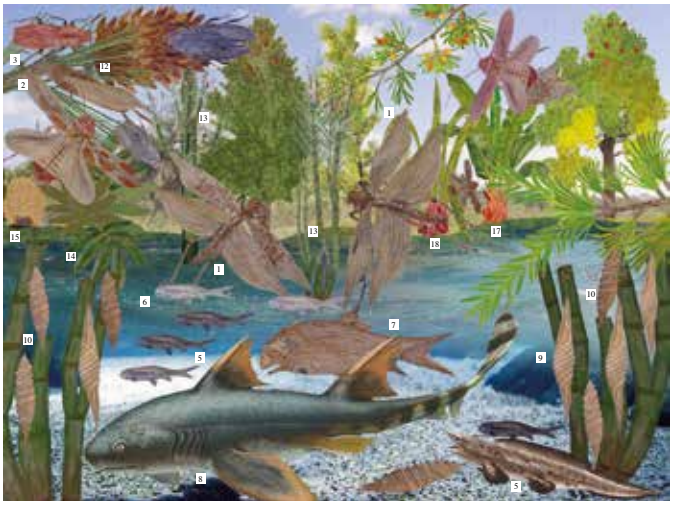
Late Triassic (Karnian, about 232 mio years), Lienz Dolomites Northern Italy

During the Carnian, especially the Julian stage another catastrophe - the Raibl cataclysm - reduced the plant kingdom. Especially the club moss ***Selaginellites perneri*** (middle) became dominant, ferns, ginkgos and cycads were missing completely. It was accompanied by another lycopod ***Sigillcampeia blaui,*** (below left) the last small-sized survivor of the huge *Sigillaria*-trees from the Carboniferous. The conifers remained in the background and were characterized by leathery or prickly leaves. Left ***Araucarites spinosa***, in the middle at the top the spiny Cupressaceae ***Pusteria maribelae***, right one of the last Voltziaceae ***Voltzia carinthica.***

Verschiedene Einblicke in die Pflanzengesellschaften und genaue Bestimmung der Floren

Ilsfeld in the Middle-Triassic

The plains of Ilsfeld during a spring-time flood. The horse-tails a. *Equisetites arenaceus* and b. *Schizoneura merianii* are dominant. The gymnosperms are present with the cycadophyte c. *Taeniopteris angustifolia* and the conifer d. *Swedenborgia nissleri*. The fern-association include e. *Symopteris rumpfii*, f. *Danaeopsis marantacea*, g. *Cyatheites rigida*, h. *Asterotheca merianii*, i. *Chiropteris lacerata.* Also the small-sized lycophyte j. *Lepacyclotes zeilleri* can be encountered.



A Middle-Late Triassic habitat from Madygen (Kyrgyzstan). *Gigatitan vulgaris* (1), an early representative of the mantises (Mantodea), and the cockroach (Blattodea) ***Subioblatta madygenica*** (2) dominate an extremely rich insect community. Both show partial colour patterns on the wings. The beetles (Cupedidae) such as ***Dolichosyne sulcata*** (3) and ***Lithocupes punctatus*** (4) were also numerous. Among the fish, ***Sixtelia asiatica*** (5) from the Palaeonisciformis group predominated, as did the ray-finned fish (actinopterygians) ***Ferganiscus osteolepis*** (6) and the considerably sized ***Oshia ferganica*** (7). There were numerous hybodont sharks ***Lonchidion ferganensis*** (8) with associated egg capsules ***Palaeoxyris alterna*** (9), as well as xenacanthid freshwater sharks with slightly different capsule shapes ***Fayolia sharovi*** (10). The conifers were represented by ***Podozamites dobruskinae*** (11), an early representative of the golden larch (Pseudolarix) and ***Swedenborgia dudashvilii*** (12) with its recent representative of the

Weltweiter Erfahrungsschatz

A flora community in the Lower Jurassic of Southern Germany. The conifers ***Swedenborgia liaso-keuperianus*** (1), ***Podozamites distans*** (2) and ***Hirmeriella muensteri (***3) were common. Other gymnosperms such as ***Ginkgoites dichotoma*** (4), and the cycad ***Nilssonia acuminata (***5) enriched the landscape. Large numbers of fern families were present in different variations such as ***Thinnfeldia rhomboidales*** (6), ***Phlebopteris angustifolia*** (7) or ***Dictyophyllum acutilobum*** (8).

The conifers in the Lower Jurassic of southern Germany. On the left, the ***Swedenborgia liaso-keuperianus*** with its five-pointed seed scales is depicted; in the middle is the most common conifer ***Podozamites distans*** with female and male cones; on the right is ***Hirmeriella muensteri***, with its small round pollen cones and seed scales with two wing seeds.

Quer durch die verschiedenen Epochen

A flora community from the Lower Cretaceous of Central Europe (140 million years ago). The cycad ***Dioonites lyellanum (*1)** with its peculiar female and massive male cones was common. ***Gingkoites pluripartitus* (2)** was also widespread. The conifers were dominated by ***Sphenolepis sternbergiana* (3).** The club moss family was represented by ***Seppeltia bockii* (4).** The ferns included ***Dennstaedtites geinitzii* (5)** and ***Wiedenrothia klipsteini* (6).**

Neue Interprteationen: Die Bennettiteen

Dioonites lyellianum. Early Cretaceous. Female plant. Reconstructions

a. Female plant; b. Detail with three seed cones, partially disintegrated; c. Juvenile female cone; d. Ripe, partially decayed cone; e. Macrosporophylls, front, back; f. Isolated seeds; G. Leaf fronds

Dioonites lyellianum. Male plant

h. Male plant; i. Pollen cones; j. Microsporophyll upper surface; k. Microsporophyll, underside with pollen sacs; l. Isolated pollen sacs