What's new in TS-Creator version 5.4

Released 1 June 2012

Version 5.4 has the following major enhancements, which are explained in detail in this document or in the composite Manual. Nearly all were excellent recommendations from current PRO users. Thank you!

(1) Composite manual (ca. 200 pages) for users and datapack makers
(2) Evolutionary tree (phylogeny) columns;
with Paleogene Foram evolution datapack example linked to Chronos taxonomy
(3) Enhanced cross-plot and depth-age conversion
(4) Mappack enhancements (and mappacks for Australia, Indian plate, Middle East, etc.)
(5) Phanerozoic carbonate trends, climatic periods, main hydrocarbon episodes, etc.

There are also several minor improvements.

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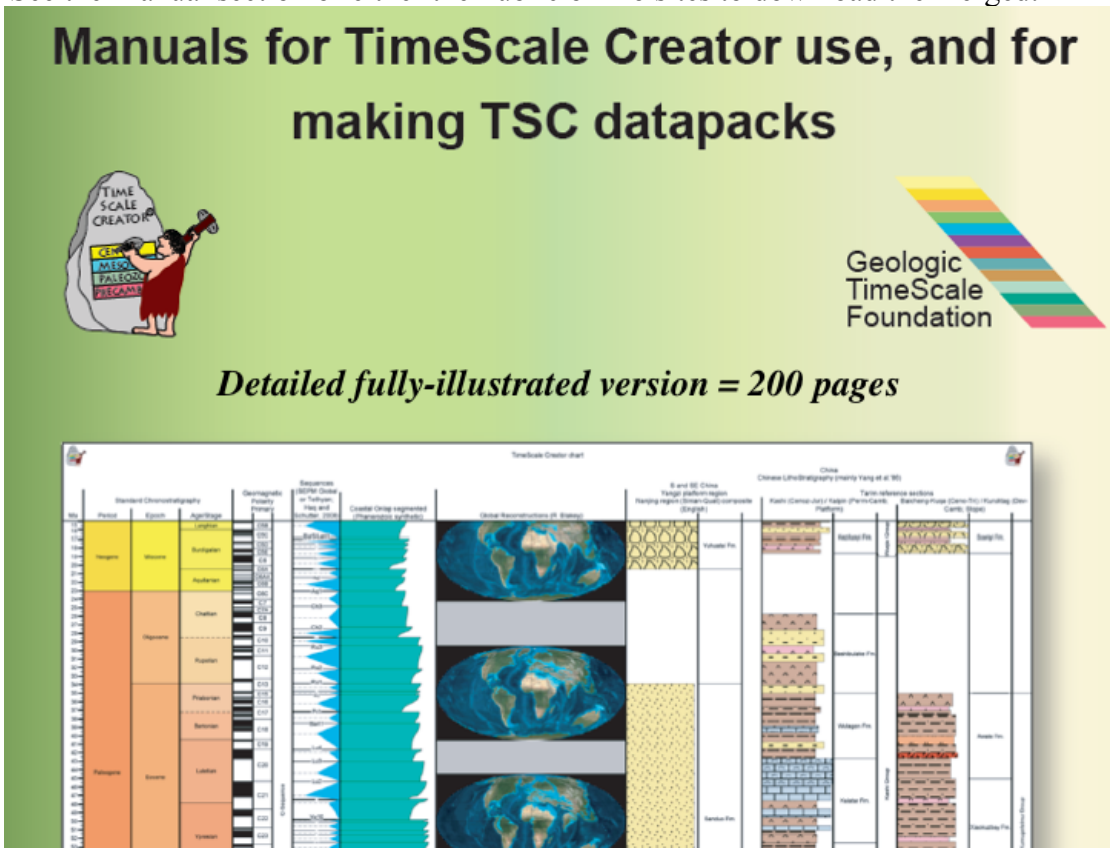
Version 5.4 new features

(1) Manual.

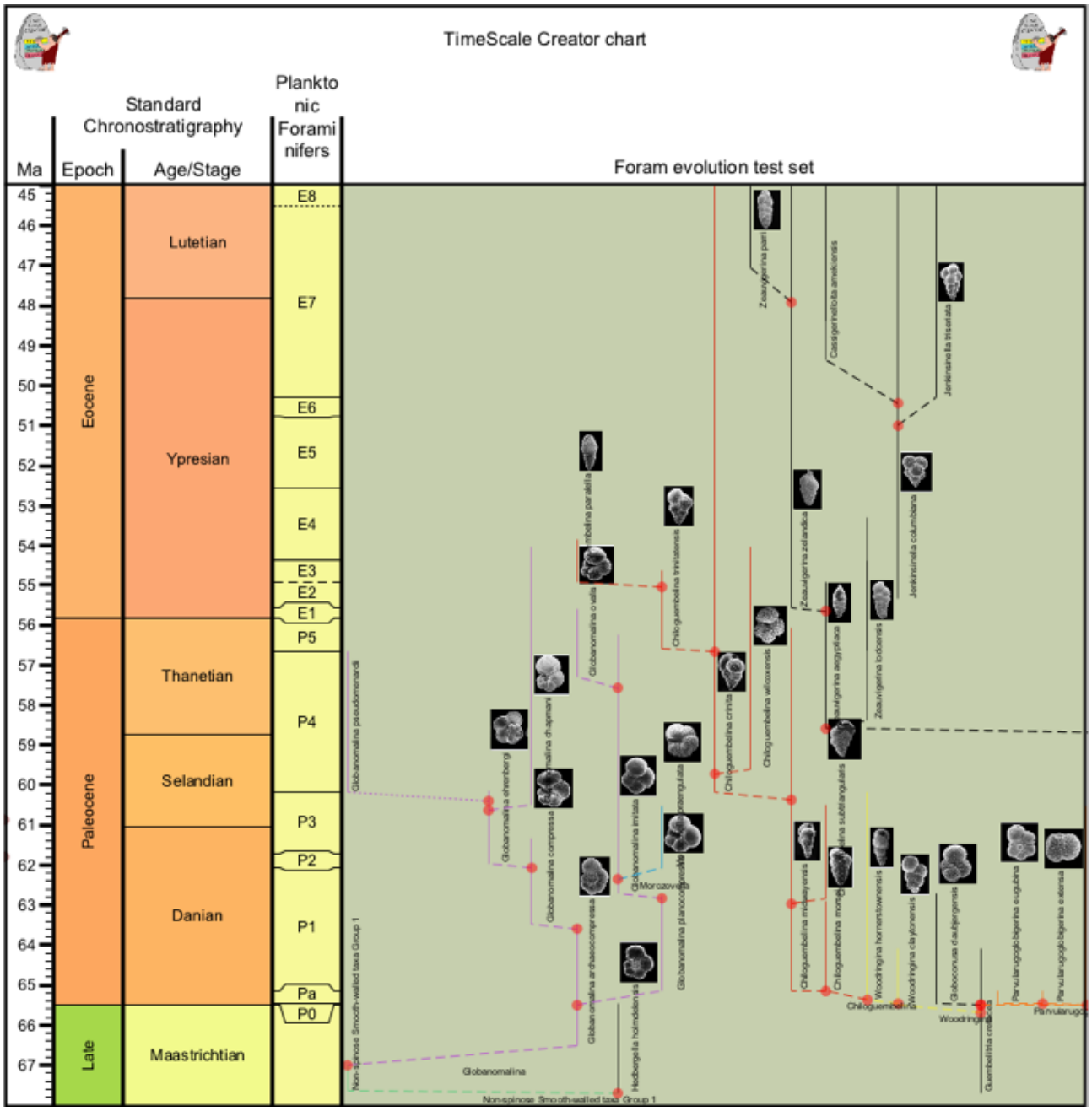
See the Manual section of either the Public or Pro sites to download the merged:



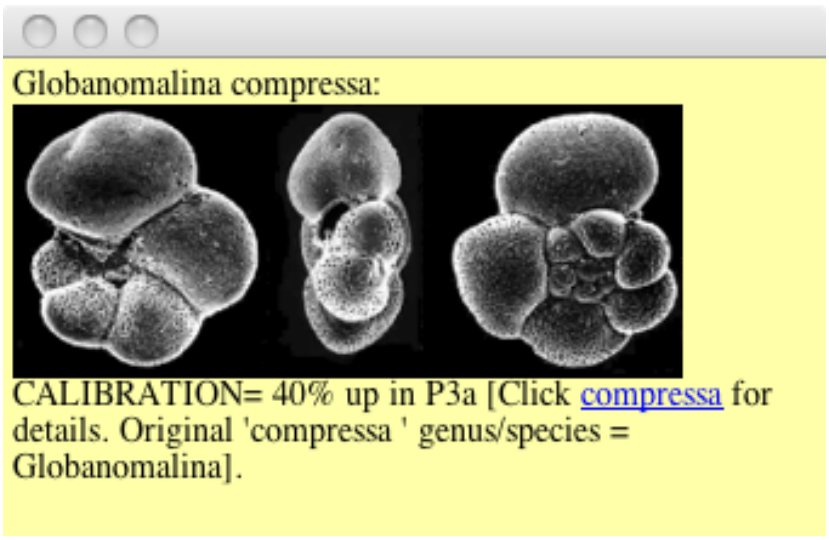
The first section details usage of TSCreator, including cross-plot. The second section explains all aspects of creating datapacks for all types of columns, plus an extended explanation for making transects.

(2) Evolutionary Trees.

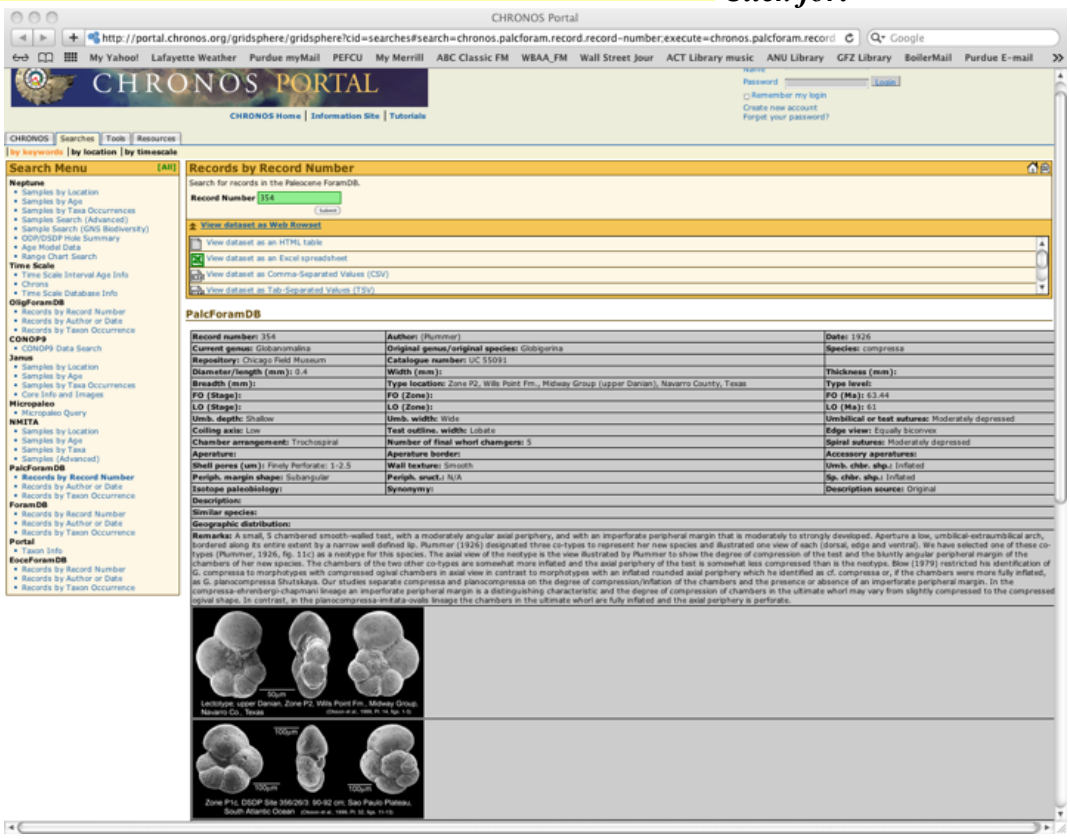
An extension of the "range" column is the ability to display branches between ranges to show interpreted evolutionary connections. The trees can be compacted, such that "new branches grow over dead ones" if one clicks that option on the Settings screen (bottom menu set).



Both the Public and Pro versions contains a datapack "Paleogene Planktonic Foraminifer Evolution" that is based on a compilation by C. Liu, R.K. Olsson, W.A. Berggren, P.N. Pearson, C. Hemleben, B.T. Huber, and L. Leon-Rodrigues (2009; poster given at NAMS, but provided by C. Liu to TSCreator for general release). All planktonic foraminifer ranges have popups with a trio of images, plus a link to the Chronos website for taxonomy details:

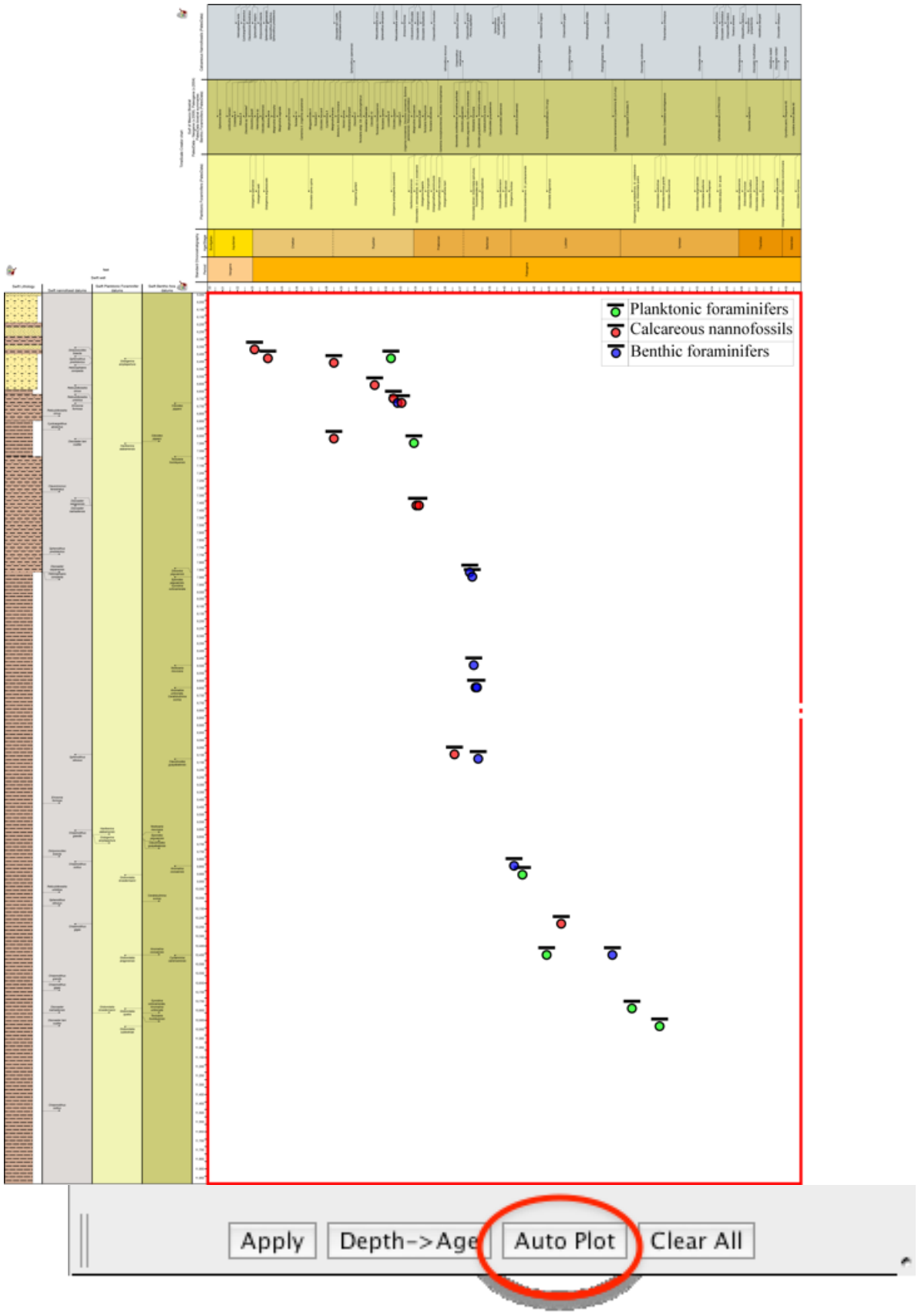


Click for:



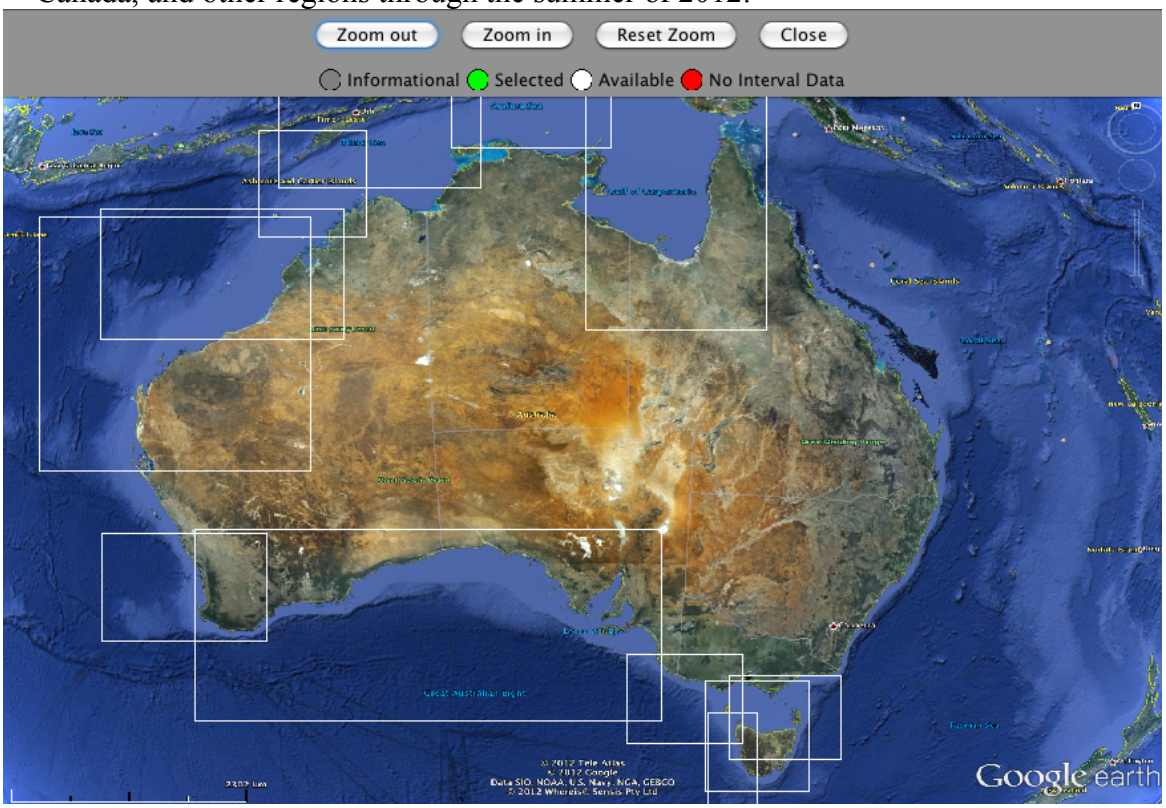
(3) Enhanced cross-plot and depth-age conversion

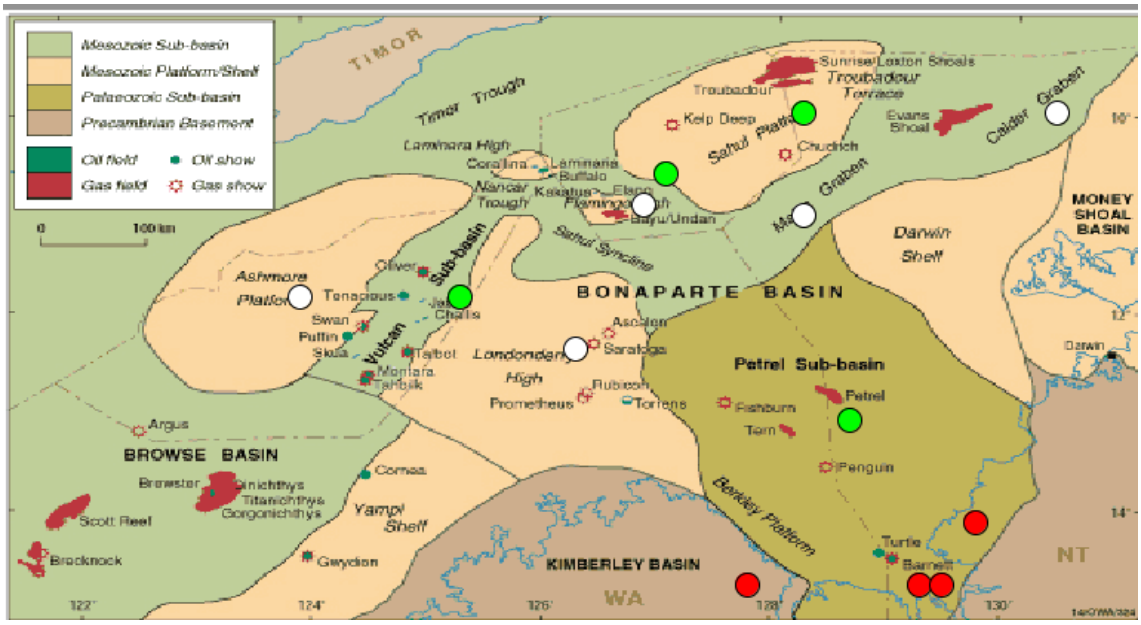
As part of a project to make this tool available to college stratigraphy classes, the interface has been expanded, an auto-match feature was added (including auto-symbols), stage-background colors, and a depth-to-age conversion that automatically puts the converted file (including geophysical logs) adjacent to the reference timescale. See extended section in the composite manual on how to use the different features. This will be also mounted as geo-education module using a Gulf of Mexico transect this summer.


Planktonic foraminifers
Calcareous nannofossils
Benthic foraminifers
Apply
Depth->Age
Auto Plot
Clear All

(4) Vertical perspective ("Google Earth") geographic interface with sub-maps

We have mounted regional datapacks for Australia (with offshore basin sub-maps; developed with Geoscience Australia), Middle East, India and China that use a modified "Google Earth" type geographic interface. One mounts these mappacks, then uses them to select columns (red/green/white dots) similar to the regular column menu system. The two sets work together. We will be mounting similar geographic packs for New Zealand, Canada, and other regions through the summer of 2012:





(5) Phanerozoic carbonate and other long-term trends

Within the "Global Trends, Impacts, Volcanism, Tectonics" directory in the internal TSCreator 5.4 package are Carbonate Trends (Reef ecosystems, platform types, major reef builders), Icehouse/Greenhouse conditions, and Hydrocarbon system overviews (anoxic events, major source-reservoir-seal episodes). The main references are Markello, J.R.; Koepnick, R.B.; Waite, L.E.; and Collins, J.F., 2006, *The Carbonate Analogs Through Time (CATT) Hypothesis and the Global Atlas of Carbonate Fields- A Systematic and Predictive look at Phanerozoic Carbonate Systems*, in Lukasik, J. and Simo, T. eds., Controls on Carbonate Platform and Reef Development, SEPM Special Publication; and Lowell Waite (author) and Roger Gilcrease (compiler), 2002. *Phanerozoic Cycles and Events (NV PXD Global Stratigraphic Chart* 02.DSF), March 27, 2002 (printed by Pioneer Natural Resources; permission provided by L. Waite).

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Coming in Version 6.0 (to coincide with publication of GTS2012 in August, 2012):

(1) ***Geologic TimeScale 2012*** revision of all age models; updated zonations; etc.
(2) Calcareous nannofossil display with images, linked to Nannotax
(3) Vertebrate evolution
(4) Web-service for general public

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Contact Jim Ogg (*jogg@purdue.edu*) for any questions, suggestions or comments.

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As always, we welcome your suggestions for enhancements, datasets, user-interfaces and other ways to improve the TimeScale Creator systems!

The TimeScale Creator visualization system and datapacks are products of the non-profit* Geologic TimeScale Foundation. *Visit www.tscreator.org (which redirects to a server at Purdue University) for more information, manuals, educational modules, etc. The PRO portion of the site requires a user-password.