



Hdb2Win/PaleoTax

Program Release 2.2.0 (1 January 2006) / Service Release 7

Modifications compared to program release 2.1.0

The new program release encompasses some minor changes, and some errors are removed. Substantial changes as follows:

- In the display error form, warning errors can be switched off and on.
- When working with more than one database, the size of each database is recorded and stored separately and therefore displayed correctly.
- The size of the portion of the file list when selecting graph files can be modified. To do so, search in the HDB2WIN.INI file in the section
HDCON
for
ListPortion%
and set a value between 15 and 85. The value gives the size of the file list (left hand side). A small value gives you a larger window to see your graphs (realized on request by Alexey).
- There occurred some problems in listboxes when the items are too long to fit in the box. For any reason, Windows offers generally no horizontal scrollbars in listboxes. To handle this problem, first, the standard font size of listboxes can be modified now. Compare in the HDB2WIN.INI, section
[HDFRM]
item
ListBoxFontSize
This value is set to 9 pt by default. Before, this value was equal to the font size of labels (by default 10 pt). The list box font size may be overwritten locally in the FRM files (FSIZE). But in most forms (as far as I am aware), this value is not set and the form interpreter will therefore use the default value of ListBoxFontSize.
Second, when clicked at an item in the listbox, a hint with the complete item appears. If this additional service may bother you (as a certain nodding paper clip) you may switch off this hint in the HDB2WIN.INI, same section as above, by setting item
ShowListBoxHint
to zero. In this case the hint which is locally (in the FRM file) defined, will be displayed (if any).
All this depends of course on ShowFieldHints (same section): if this item is zero, no hint will be displayed at all.
- Even if not modified, **F10** always closes the text edit window.

Modifications compared to program release 2.1.1

The new program release encompasses various minor changes, and some errors are removed. Substantial changes as follows:

- The output mode Table (Browse) allows to modify entries without switching into the Edit mode (by `Enter`). The following functions are applied:
 - Interconnected fields - `Del` deletes the field, any other key (including `Spacebar`) let you select an new item.
 - Character and numeric fields - any character (including `Spacebar`) open a windows where you may edit the item. `PgDn`, `F10` or `Enter` saves the changes, `Esc` does not.
 - Logical fields - `Spacebar` switch TRUE to FALSE and vice versa.
 - `F8` tag or untag the record as being deleted.
 - As before, `Enter` opens the Edit form. The caption of the table is updated when switched to another item.
- The "Carry On" mode caused in the past some problems. Therefore some changes were applied as follows. To provoke that Hdb2Win carries the complete content of the previously edited record to the next (new) one (only in the Append mode), in HDB2WIN.INI the value


```
CarryOn
```

 in the section


```
[HDDEF]
```

 must be set to '1' (default = 0). As well, for each concerned table, a line must be added in the DB2 file:


```
carryon 1
```

 Independently from all this switches, the content of the previously edited record can be carried on manually by pressing `Alt+C` (in the Append and Edit mode).
- Labels and fields in edit forms are extended by a new feature: the font style. The style is bitwise coded:
 - Bit 1 = bold,
 - Bit 2 = italic,
 - Bit 3 = underline,
 - Bit 4 = strike out.
 The various styles can be combined; for example '5' corresponds to bold and underlined. In the FRM files, the style is indicated as


```
STYLE <object number>,<value>
```

 with the object number (as usually, 1024 refers backward) and an appropriate value between 1 and 15 (0 by default). The font style applies always to the complete field, not to a part of it.
- The LIST and FORM commands in the command line, as well as the 'List' option in PaleoTax usually produce files in the ASCII format. This has been modified. These procedures now produce files in the ANSI format. To keep ASCII, refer to HDB2WIN.INI and change the value


```
ConvertToANSI
```

 in the section


```
[HDSEQ]
```

 to '0'. When text files are displayed in PaleoTax and the `ConvertToANSI` switch is turned on, files will be not converted to ANSI (as it would be the case when they are in the ASCII format).

- The number of types (in Species), type species (in Genera), localities (in Citations), documents, pictures and references (various tables) is only displayed when the value
ExtCountMode
in the section
[HDCON]
has a value different from zero. The number of items behind the button is only displayed when above one; otherwise the caption is only bold printed.
- The inline concept of the interpreter has been changed; various inline files can be combined in the program files and included in any position of the source code.
- To ease the selection from a short list of items, combo boxes has been introduced. A combo box has to correspond to a numeric data field, and has to be declared as follows in the appropriate FRM file:
CBOX 510, "very poor;poor;mean;good;very good;excellent", BEER
; BEER = name of the corresponding data field
POSOBJ 1024, 580, 360, 100, 24, 1
FSIZE 1024, 8
The first parameter in CBOX represents an ID as in all other objects. The second parameter contains the list of items, separated from each other by a semicolon. The last parameter gives the name of the corresponding numeric data field. When the first item is selected from the box, the number 1 will be stored into the corresponding field. The value zero indicates undefined items; the combo box shows a question mark.
This items are not yet visible in the Table output mode. Comes later.
- Together with the new release, the program PaleoTax/Graph will be installed. See the separate documentation as PDF (PGRAPH.PDF). At the present moment, not many (PaleoTax) programs produce output data for PaleoTax/Graph, but its number will increase in the future.

The index files used in the Interpreter are now better decoupled from PaleoTax index files. This may result in some places unsorted lists or outputs. Please report this so I can update the appropriate programs.

Modifications compared to program release 2.1.2

Hdb2Win

New Scanner/Parser

The Scanner/Parser module, an important part of the database engine is completely replaced. The new expression parser is smaller, faster and much more flexible. It understands more data formats (e.g. hex, time and date). Unfortunately it caused more and serious problems with long-strings than expected, and this is one of the reasons for the delay of the new sub-version.

A certain number of new functions is implemented as well. A certain limit may be, that the names of symbols in interpreter programs must not have reserved names. And there is one change which may be important to users who use the function 'Enter condition' in the PaleoTax application : for instance, when you would like to know which occurrences are from a certain lithostratigraphic unit, you entered before (table OCCURRENCES) `locality.loclitho=?`. This need to be changed now to `?locality.loclitho`.

The arithmetic resolution is strictly from left to right. So, 2^3^2 results in 64 in the sense of $(2^3)^2$, and not in 512 in the sense of $2^{(3^2)}$.

Negative exponents are rejected. $a^{(-b)}$ needs therefore be transformed into $(1/a)^b$.

The new Scanner/Parser module offers some more functions, as they are

DECIM - converts a hex string into an integer. When the string is invalid, -1 is returned.

DECIM('1f2f') = 7983

DOY - day of year of a decimal date.

DOY(DATVAL(DATE)) = 274 ; for the 1 October 2005

FUNCINFO - gives an information about the requested function (number).

FUNCINFO(27) → 'DELINS(S,I,I,S) = S'

HEX - converts an integer value into a hex number (results in a string).

HEX(111) → '6F'

MONTH - Returns the number of the months of a decimal date.

MONTH(DATVAL(DATE)) → 11

SIM - compares two strings and gives the percentage of similarity. Zero indicates that the two words have no joint letter, 100 indicates that the words are identical.

SIM('Sheep','Dog') → 0%

SIM('Cat','Cow') → 16%

SIM('Cat','Cats') → 60%

TIMESTR - converts a number into a time string of the format HH:MM:SS.

TIMESTR(70000) → '19:26:40'

TIMEVAL - converts a time string of the format HH:MM:SS into a value (seconds from midnight).

TIMEVAL('12:28:12') → 44892 (integer)

Options

For the options saved in the HDB2WIN.INI see the Manual provided for version 2.1. Here, only updated and new items are reported. The current number refers to the functions of the interpreter which have access to this values.

- | | | |
|----|--------------------|--|
| 70 | RequestSave=0 | If zero, the program asks whether a changed but unsaved record should be saved. |
| 71 | ExtCountMode=1 | If one, connected items (graphs, documents, references) are counted; if zero, it is only checked whether there are any items present or not. If not zero, may slow down the work of the form editor. |
| 72 | ExtListMode=0 | Internal. Better do not modify since it refers to a function of the file listing which is not published and not yet adapted to the new Scanner/Parser modul. |
| 73 | ListBoxFontSize=9 | Default font size of the List Boxes (pt). |
| 74 | ShowListBoxHint=1 | If one, the current item in a listbox will be shown in full length in a small window. |
| 75 | PageOpenKB=512 | Amount of memory (KB) which is made available for each index file. Depending on the amount of installed main memory it could be increased or decreased. |
| 76 | ConvertToANSI=1 | If one, screen outputs of the commands LIST, FORM and SUM are converted into ANSI (zero=ASCII). |
| 77 | TextSearchMode=1 | Last mode of full text search (only valid for PaleoTax): 1=only in data fields, 2=also in Memo fields, 3=only in Memo fields. |
| 78 | ComboBoxFontSize=9 | Default font size of the Combo Boxes. |

79	WildCardSearch=0	If one, the wild card search will be activated.
80	ASCIISort=1	This is only for German users important. If one, sorting is according the system (it means that special characters such as the German umlaut are not correctly sorted), but if set to zero, sorting will be correct.
81	ShowMaxGraphMB=20	Maximum size for graph files to be displayed.
82	GraphSizeRequest=1	If one, the user will be informed that a graph file will not be displayed, because it is too large. Otherwise the file will be skipped automatically.

Various changes

- The index format has been modified to have better control on validity of the index files (*.FIX, *.SFX). There is an auto-reorganisation function installed which rebuilds an index file automatically when not rebuilt for a certain time span.
- The size of edit forms can be set to 1280 x 1024 pixels.
- Logical and text fields are better masked in the table ('browse') mode. The status of logical fields can be changed by hitting the Spacebar key. Character fields can edited hitting the Spacebar key.

PaleoTax

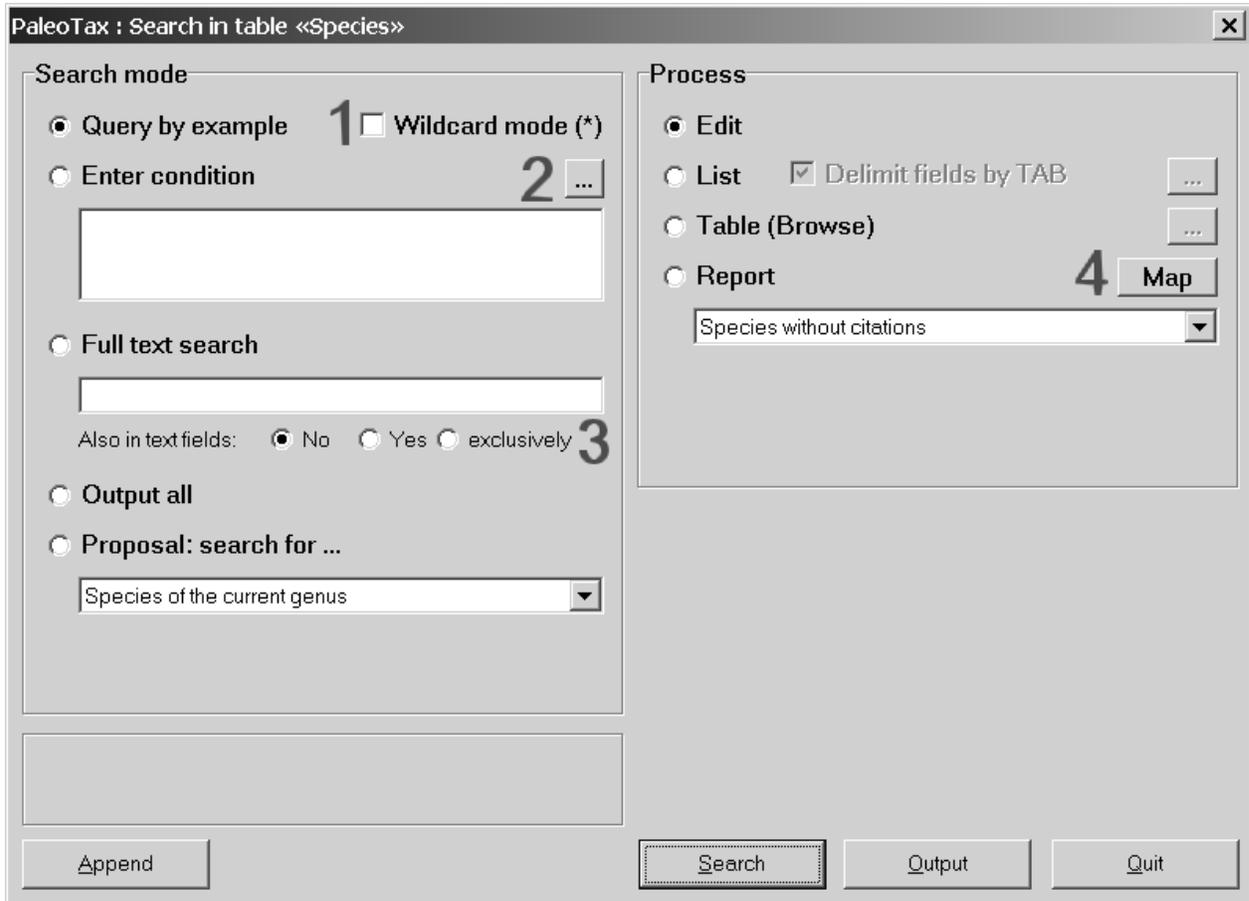
PaleoTax/Map

The map program PaleoTax/Map is integrated part of the program. It can be installed together with Hdb2Win (if the appropriate archive is downloaded), and together with the program a separate documentation file is installed. Localities, genera and species can be plotted directly from PaleoTax using the button **Map** in the Search and Output window. When colours for ages are defined, this colours will be used for plotting. If the field remains free, the default value for localities provided by PaleoTax/Map will be applied.

Database concept

The database concept was modified to make it possible to work also with other data structures (such as PalCol, the structure for palaeontologic collections). Together with the program, configuration files (*.APP) and screen files (*.WMF) will be installed in the program folder. Depending on the PTX file in your data folder (which opens and describes the database) the correct application screen and file boxes will be displayed.

By now, only the applications PaleoTax and PalCol are published; a data structure to record, output and visualize geological sections is under preparation.

Various changes

- The search mask in the PaleoTax application has been improved (see above screen-shot).
 - (1) Wildcard mode. Words entered in the edit form may end with an asterisk. Valid search values would be 'Mont*', but not 'Mon*bo' or '*town'.
 - (2) It is possible to recall conditions. Click on the button to recall an old condition. The maximum number of conditions is defined in the program CONDIR.PRF.
 - (3) The full text search may include text ('Memo') fields.
 - (4) Localities, and the geographic distribution of genera and species can be directly plotted (as far as LL data are recorded).
- In the Reorganisation area, a registration file can be created.
- The import of literature from a text file (see the instructions in the manual on version 2.1) needs a third pass (IMP_REF3.PRF) to assign correctly articles which are published in books.
- If graph files are very large, their display may - depending on the processor speed and installed main memory - last some time. Therefore, if a file is larger than 20 MB, you are requested to change the limiting value or accept it. If you tag the box 'Do not ask again', the system will skip all files larger than the last confirmed value. If your computer is well equipped with main memory, you may increase the proposed value and observe how much time the display of the file will take.

Interpreter

The interpreter has gained more functionality as follows.

Arrays are supported as data types

Declaration :

```
DEFINE name, type, id, dimension
```

name = name of the array

type = data type (C, I, N=R)

id = the identification number, better to be set to 'default'

dimension = the number of elements (always starts with one)

Examples

```
DEFINE ai,i,default,100
```

```
DEFINE ac,c,1000,20
```

Write access to the array elements :

```
STOR name, index, data
```

name = name of the array

index = valid address index (above zero, below of or equal to the declared value)

data = any valid expression

Examples

```
STOR ai,1,100
```

```
STOR ai,2,200*x-1
```

```
STOR ac,1,author.fname
```

```
STOR ac,2,'empty'
```

Reading access to array elements :

Apply array name and the index in brackets. Index can be any integer expression.

Examples

```
MOV i,ai[1]
```

```
MOV j,ai[k]
```

```
MOV author.fname,ac[author.temp]
```

Not allowed is direct writing access as

```
MOV ai[2],100 ; will cause an error
```

Listbox

The list box works equivalent to the OPT commands, but can have much more items.

Initialisation :

```
LS.INI [&]title[,1]
```

Title = Title of the list box

[,1] = to be set when items are in the ASCII format and need to converted into ANSI

Add items :

```
LS.ADD [&]item
```

Item = any text

Execute :

```
LS.EXE ivar[,svar]
```

ivar = integer variable where the result has to be stored (0 when canceled)

svar = char variable of the selected item (empty when canceled)

Chart

CH.YN

Sets the minimal value for the y-axis.

CH.YN [&]value

CH.COL

Sets the colour for a specified serial.

CH.COL serial,colour

Data buffer management

In some interpreter programs side effects can be caused when no own data buffer is created. A data buffer is a buffer for one data record.

CRDB

Creates the data buffer and copies ('backups') the current data from the main data buffer into the buffer.

DLDB

Copies ('restores') the data back into the main data buffer, and deletes the buffer.

Various

CLA

Closes all open files (not only the base).

GFN

Gets the field number. Stores the current number of the data field into a integer variable.

GFN [&]name,ivar

GFN author,i

SELCOL

Selects a colour and stores the value in a integer variable.

DEFINE j,i

SELCOL j

TXT.RDL

Reads a text line of up to 1000 characters and splits it into four parts. Because each string variable can only store up to 255 characters, four variables are used.

TXT.RDL <cvar1>,<cvar2>,<cvar3>,<cvar4>

XCHI

Changes the current index. When for a currently opened table with an opened index another index is applied, the current index will be saved. This is normally only the case in programs which are called by PaleoTax.

Example

```

FILE      publicat
RESET
XCHI      ; backup current index, if any
INDEX     author.fname+year,test,o ; create an index
:begin
; ... do anything
SKIP
JNEOF     begin
INDEX     ; release created index
XCHI      ; restore old index, if any
EXIT

```

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- Table AGES. - To plot in the future genera and species in a colour depending on the stratigraphy of the locality, a field *agecolhex* has been added. The colour can be selected when clicking on the **Select** button right to the field. The selected colour will be used to paint the background of the field; the colour value is displayed in the complementary colour. It is coded as hexadecimal value, where each byte indicate one colour in the RGB model. The byte order is reverse (BBGRR); pure blue is FF0000, pure red 0000FF.
- Table AGE BOUNDARIES. - The table has been amended by some fields as *OAE* (oceanic anoxic events), *sealevel* (the niveau of the sea level) and *temper* (the temperature). Correlations with the number of species at the corresponding boundary are part of two new data analysis programs.
- Table CITATIONS. - The table is amended by a field *synmode* where the abbreviations used in synonymy lists can be stored, such as "p", "v" or "non". The edit form of the table CITATIONS has now a button **Specimens**, which helps to assign specimens which are illustrated in the citation.
- Table GENERA. - It is possible to search the table for genera within a certain time interval (see "Search", and "Proposal: search for ... ", PaleoTax 2.1 Manual, page 32-33). There are all genera reported which occur at least partly during the selected time interval. A genus, which occurs during the Albian and Cenomanian will be also reported when searching for genera occurring in the interval Cenomanian to Turonian.
- Table JOURNALS. - Has now a field for the Internet address and a button to visit the page.
- Table LOCALITIES. - At the second file card "Species" the compilation of the list of species has been modified on request by Thomas. When a species (indicated at this locality) has a senior synonym, the synonym species is listed, but in brackets indicated that the synonym species is listed ("[syn.]"). The data fields of the geographical position in the table LOCALITIES are modified: the fields *ls* and *bs* (second of longitude and latitude) allow now up to two decimals. This change was made due to the ability of PaleoTax/Map to process this data.
There is a new field *tectonic plate*. The plate can be assessed using a program offered by the ODSN Plate Tectonic Reconstruction Service (<http://www.odsn.de/odsn/services/paleomap/paleomap.html>). The plate is needed to plot the locality in a palaeogeographic map (a service which is also offered by the ODSN). Appropriate programs (converting your LL data in the required format to calculate the plate; setting the plate values in your locality table; exporting selected localities for plotting) will come with the next Service Release.
It is possible to search the table of LOCALITIES for localities within a certain time interval (see "Search", and "Proposal: search for ... ", PaleoTax 2.1 Manual, page 32-33). There are only localities

reported which really fit in the requested interval or which range is smaller, but within the interval. A search "base of Jurassic to base of Cretaceous" will yield all stages of the Jurassic, but not a locality dated as "Late Jurassic to Early Cretaceous".

- Table PUBLICATIONS. - More authors ("et al.") can be recorded in the table of Publications on request by Alexey. Behind the fifth author you will find a button entitled **et al.**. Click on this button and add more authors. The programs for creating reference lists are adapted. The table has now a field *pyear* to record the year which is printed in the concerned publication (and which differs from the true year of publication).
- Table SPECIES. - Corresponding to GENERA, it is possible to search the table for species within a certain time interval (see "Search", and "Proposal: search for ... ", PaleoTax 2.1 Manual, page 32-33). There are all species reported which occur at least partly during the selected time interval.
- Some new programs for analysing the database are installed as well. See the appropriate PDF (ANALY2_E.PDF; AUSW2_D.PDF) for details (installed in the HDB2WIN folder).
- The second pass of the program which imports literature (IMP_REF2.PRF) had a minor error, which is now removed.
- The Service Release contains a program collection called "PaleoTax Tools" which offers various programs to analyse the data. You will find the program behind "Catalogues etc." named "PaleoTax Tools". The various functions of this program do not modify any data; results are always written to text files in the ANSI format.
- The programs to test the internal data integrity (TESTINTG.PRF, CRASH.PRF) do write a report which is saved to CRASHLOG.TXT.

Service Release 7

It is strongly recommended to make backup copies of your database before applying SR7. The amount of changes in your database is comparable to that carried out by SR6. The SR7 consists practical of two steps and you should really take both to avoid problems. The first step is the SR7 itself, the second step the conversion of 'Books' into 'Publications' (IMP_REF3.PRF, 'Import of references, pass 3 (Transfer books into publications)'). When you have passed SR7 you need to pass also the second step; otherwise you will experience problems when exporting literature into text or HTM format.

Step 1

The program SR7.PRF you will find as always in your HDB2WIN\SR7 folder. Load the file, start it, read carefully the instructions and answer properly the questions. See also the separate file SR7.PDF. User, who installed Hdb2Win version 2.2 for the first time do not need to do anything since their structure is already on the level of SR7.

Step 2

The idea of this conversation is, that books (where articles are published) do not need an own table; they can be stored as publications and an additional table may connect both ('Articles in books').

The program IMP_REF3.PRF will be installed by SR7 in your data folder. Start HDB2WIN, select Interpreter and open the file IMP_REF3.PRF ('Import von Literatur, Teil 3 (Bücher nach PUBLICAT transferieren)', 'Import of references, pass 3 (Transfer books into publications)'). Get not confused by the title ('Import of references'). Click on **Run**.

There are two options:

1. Books will be appended without comparison to the table of "Publications", independently whether the concerned books are probably already recorded there or not.
2. The user may check which records will be appended and which not.

If you decide for the first option, books will be automatically appended, independently if they are already recorded or not. In the second options (which is recommended), the program search the table and makes proposals as

Are

Advanced Studies in Palaeontology (book)

and

Advanced Studies in Palaeontology (publication)

identical ? If yes, the book will not be appended to the publications.

If you click on **Yes**, the book will be not appended, but article and book connected. If you click on **No**, the book will be appended (and linked as well). If you are unsure, better choose **No**.

Changes of the data structure

Please note the following changes compared to SR6:

- Table LOCALITIES. A new field 'Facies' was added which refers to a new table FACIES.
- Table PUBLISHER. A field for the abbreviation of the journal was added. Some instruction for authors demand abbreviated journal names.
- Table PUBLICATIONS. The field 'Book' was removed and replaced by a button. Books are considered as publications and it is only a special feature that a article is not published in a journal but in a book as explained above. The program IMP_REF3.PRF helps you to adapt your data. Two new fields were added to allow the user to record his own remarks (as status or location). Both fields are related to two files.
- Table GENERA. The fields 'Super family' and 'Super family assigned' have been added. A button **Junior synonym of ...** is added. This button makes a connection to the new table GENERA SYNONYMY, which is absolutely personally. The system will not modify or comment (in the consistency check) records of the table. I am not convinced to apply the change of current genera of species globally. Optionally, future versions of catalogues will allow to incorporate the data of this table in the output. As well a critical stratigraphic distribution was added.
- Table PICTURES TO TABLES is provided with a checkbox whether the graph should be included into the HTML output.
- Table REFERENCES TO TABLES is provided with two new fields. The checkbox *No output* suppresses the output of the reference in the catalogues (at the moment only the catalogue of localities). The field *Page* allows to add an additional page number.
- Table SPECIES has a critical stratigraphic distribution.
- The program to create a HTML output of the database allows also the output of pictures (tables GENERA, LOCALITIES, SPECIES). When this option is selected, it can be decided whether all pictures, only marked pictures, or only not marked pictures are included into the HTML file. Picture destination is always a path named pictures/ (all small caps). The files needed are listed in a file named GRAPHS.TXT; these files must be uploaded and stored in the folder pictures/. The slash ('/') is preferred since most servers run under Unix. If your server does not support the slash, you need to edit the file HTML_L22.PRF, symbol outpathg (about line 60, you may also change the path name). All file names must be in small caps ! - The output of pictures does not work for the output of

selected genera, species etc. from the PaleoTax search window, only when the whole database is exported to HTML.

New Tools

Tectonic plates

The program PLATENO.PRF helps you to assign tectonic plates to your localities which you need when you will plot your localities in the palaeogeographic reconstruction provided by the OSDN Interactive Plate Reconstruction Service. To process the data, you have to leave PaleoTax, to start the Interpreter and to search the file PLATENO.PRF ('Zuweisung der Tektonischen Einheit an Lokalitäten', 'Assignment of tectonic plates to localities') in your data directory. The program process only localities where approximate geographic positions are available (seconds are not required).

1. The program encompasses two steps. In the first pass, your data are exported into a text file (LOCPOS.TXT).
2. Then you have to visit the Internet page of the OSDN Interactive Plate Reconstruction Service (http://www.odsn.de/odsn/services/paleomap/get_plate.html) and to put the content of the locpos.txt-file into the appropriate window and assess the plates. When finished you have to copy the results from the window into a new text-file (let us assume this is LOCPOS2.TXT).
3. Start PLATENO.PRF again and choose the second pass. Select the file LOCPOS2.TXT. Plate codes will be now transferred into the LOCALITY table.

Further you may plot your localities in the palaeogeographic maps of the OSDN site using the output profile Locality 3. In the output profile LOCAL3.PRF ('Profil Lokalitäten (3) Export nach OSDN "Plattentektonische Rekonstruktion"', 'Report localities (3) Export to OSDN "Plate Tectonic Reconstructions"') the format of the label can be modified (change the content of the variable CurrentFormat).

Miscellaneous

- The program to check the consistency of the database has been improved. Some new procedures were added.
- The program AW029.PRF of the data analysis had an error (and nobody has found it!) which is removed in the new version.
- Various output formats and sort modes were added.
- The PaleoTax Tools (PTXTOOLS.PRF) are improved.
- The program PTXSYS.PRF ('Systematic') is something like another catalogue which outputs the taxonomic levels from the phylum down to the subspecies. The desired taxonomic levels for output can be selected.

Additional Information

- Some users requested to change the length of some fields. This changes are incorporated in new structural versions, but already existing tables will be not modified. It is therefore recommendable to do this manually. You have to choose the 'Commandline' application, move to your data path via CD ? (opens a window), open the file via USE <name> (where <name> is the name of the concerned table), and type MODI STRU. In the text editor just modify the length of C-fields (up to 250). Do not touch other fields or the field names and click on **Save**. Changes of the length of fields do not correspond to a structural change (when you will be asked in the next Service Release).

- Registered users need to register another time to get their code. This helps me to keep the user list up to date. Registration is now also more easy; there is a function under 'Reorganisation' which will create an appropriate RTF file. Already registered user may just send this file without modification when other information has not changed. Registration also helps me to defend my programming activities against my university administration, who is always concerned about that.
- The manual for version 2.1 is still valid for PaleoTax 2.2. There are not too many changes and practical everything new is documented in this file. But really read the manual. It answers most questions.
- Many thanks are going to Alexey, Markus, and Noritoshi for their critical remarks. Advice, desires and comments are **always** welcome, also if I cannot realise them on the spot. I have to apologise for the delay also for this release, but as almost everybody of you knows, I am a mere researcher and teacher and I am not paid by my university to develop software.

Looking forward

- Unfortunately it was not possible to provide now the version in the Spanish language. This is one of the next tasks. Also a French version is planned (PaleoTax 1.x could work in this language, but forgot, as its author, almost everything). An interesting option would be also the integration of palaeogeographic maps, even if external help is needed.
- The data analysis need improvement and the visualisation of the results. But here, the user input is required. Many programs are ready to use which I wrote for my own purposes, but I will not adapt them all to user friendly style just in case a user could be interested. The problem is, that many estimations require to set various options, and this need profound explanation. You cannot just run these programs and look what is coming out. Your requests are needed, you have to tell me what you want to know. Data visualisation is also a very interesting option - users may only check my recent publications on Cretaceous corals where I consequently applied PaleoTax. The results and its figures are produced using the database and programs.
- There are also still certain problems when users create their own fields and modify the form files (*.FRM). Normally this should work, but the present solution is not very elegant and I am still thinking about a more clever solution. The form unit will be definitely the next which need to be replaced, as well as the index unit which had in March 2005 its 10th birthday.
- I am also in contact with John Alroy (Santa Barbara, CA, USA), co-ordinator of the *The Paleobiology Database* to provide an interface from PaleoTax to this database.

Appendix - Which formats produce which type of reference list ?

This appendix shows you the differences between the various formats to output reference lists. If you cannot find a format which is comparable - just send some examples of your desired format and the program will be included into the next Service Release.

(1) *Literaturhinweis / Reference*

- LÖSER, H. 1994a. (ed.) The Mesozoic corals. Bibliography 1758-1993. -- *Coral Research Bulletin*, 1: 1-99; Dresden (CPress Verlag).
- LÖSER, H. 1994b. Geologie und Palökologie der Korallenfauna des Kassenberges in Mülheim/Ruhr (Westfälisches Kreidebecken; NW-Deutschland). -- *Coral Research Bulletin*, 2: 1-19, pl.1-8; Dresden (CPress Verlag).
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- LÖSER, H. 1994d. Kreidekorallen vom Kassenberg in Mülheim/Ruhr. -- *Fossilien*, 5: 304-310; Weinstadt.
- LÖSER, H. & LATHUILLIÈRE, B. 1994a. Die Struktur taxonomischer Daten in der Paläontologie und ihre Verarbeitung in einer Datenbasis. -- *Beiträge zur Mathematischen Geologie und Geoinformatik*, 5: 165-172; Köln.

(3) *Literaturhinweis (Neues Jb...) / Reference (Neues Jb...)*

- LÖSER, H. (1994a): (ed.) The Mesozoic corals. Bibliography 1758-1993.- *Coral Res. Bull.*, 1: 1-99; Dresden (CPress Verlag).
- LÖSER, H. (1994b): Geologie und Palökologie der Korallenfauna des Kassenberges in Mülheim/Ruhr (Westfälisches Kreidebecken; NW-Deutschland).- *Coral Res. Bull.*, 2: 1-19, pl.1-8; Dresden (CPress Verlag).
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- LÖSER, H. & LATHUILLIÈRE, B. (1994b): Data banks in palaeontology and the need for standardization.- - In: OEKENTORP-KÜSTER, P. [Ed.]: Proceedings of the VI.International Symposium on Fossil Cnidaria and Porifera held in Münster, Germany 9.-14.September 1991.: *Courier Forschungsinst. Senckenberg*, 172: 419-427; Frankfurt/M.
- LÖSER, H. (1994d): Kreidekorallen vom Kassenberg in Mülheim/Ruhr.- *Fossilien*, 5: 304-310; Weinstadt.
- LÖSER, H. & LATHUILLIÈRE, B. (1994a): Die Struktur taxonomischer Daten in der Paläontologie und ihre Verarbeitung in einer Datenbasis.- *Beiträge zur Mathematischen Geologie und Geoinformatik*, 5: 165-172; Köln.

(4) *Literaturhinweis (Geobios, CretRes) / Reference (Geobios, CretRes)*

- LÖSER, H., 1994a. (ed.) The Mesozoic corals. Bibliography 1758-1993. *Coral Research Bulletin* 1: 1-99.
- LÖSER, H., 1994b. Geologie und Palökologie der Korallenfauna des Kassenberges in Mülheim/Ruhr (Westfälisches Kreidebecken; NW-Deutschland). *Coral Research Bulletin* 2: 1-19, pl.1-8.
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- LÖSER, H., LATHUILLIÈRE, B., 1994b. Data banks in palaeontology and the need for standardization. In: OEKENTORP-KÜSTER, P. (Ed.), Proceedings of the VI.International Symposium on Fossil Cnidaria and Porifera held in Münster, Germany 9.-14.September 1991. *Courier Forschungsinstitut Senckenberg* 172: 419-427.
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(5) Literaturhinweis (SEK) / Reference (SEK)

- LÖSER, H., 1994a: (ed.) The Mesozoic corals. Bibliography 1758-1993. - Coral Research Bulletin, 1: 1-99, Dresden.
- LÖSER, H., 1994b: Geologie und Palökologie der Korallenfauna des Kassenberges in Mülheim/Ruhr (Westfälisches Kreidebecken; NW-Deutschland). - Coral Research Bulletin, 2: 1-19, pl.1-8, Dresden.
- LÖSER, H., 1994c: La faune corallienne du mont Kassenberg à Mülheim-sur-la-Ruhr (Bassin crétacé de Westphalie, Nord Ouest de l'Allemagne). - Coral Research Bulletin, 3: 93 pp., 14 pls., Dresden.
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- LÖSER, H., 1994d: Kreidekorallen vom Kassenberg in Mülheim/Ruhr. - Fossilien, 5: 304-310, Weinstadt.
- LÖSER, H., LATHUILLIÈRE, B., 1994a: Die Struktur taxonomischer Daten in der Paläontologie und ihre Verarbeitung in einer Datenbasis. - Beiträge zur Mathematischen Geologie und Geoinformatik, 5: 165-172, Köln.

(6) Literaturhinweis (Paleobiology) / Reference (Paleobiology)

- LÖSER, H. 1994a. (ed.) The Mesozoic corals. Bibliography 1758-1993. Coral Research Bulletin 1: 1-99. CPress Verlag, Dresden
- LÖSER, H. 1994b. Geologie und Palökologie der Korallenfauna des Kassenberges in Mülheim/Ruhr (Westfälisches Kreidebecken; NW-Deutschland). Coral Research Bulletin 2: 1-19, pl.1-8. CPress Verlag, Dresden
- LÖSER, H. 1994c. La faune corallienne du mont Kassenberg à Mülheim-sur-la-Ruhr (Bassin crétacé de Westphalie, Nord Ouest de l'Allemagne). Coral Research Bulletin 3: 93 pp., 14 pls.. CPress Verlag, Dresden
- LÖSER, H. and B. LATHUILLIÈRE 1994b. Data banks in palaeontology and the need for standardization. 164 in P. OEKENTORP-KÜSTER, ed. Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera held in Münster, Germany 9.-14. September 1991. Courier Forschungsinstitut Senckenberg
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