Comparison of the main screens of Intkey and Lucid

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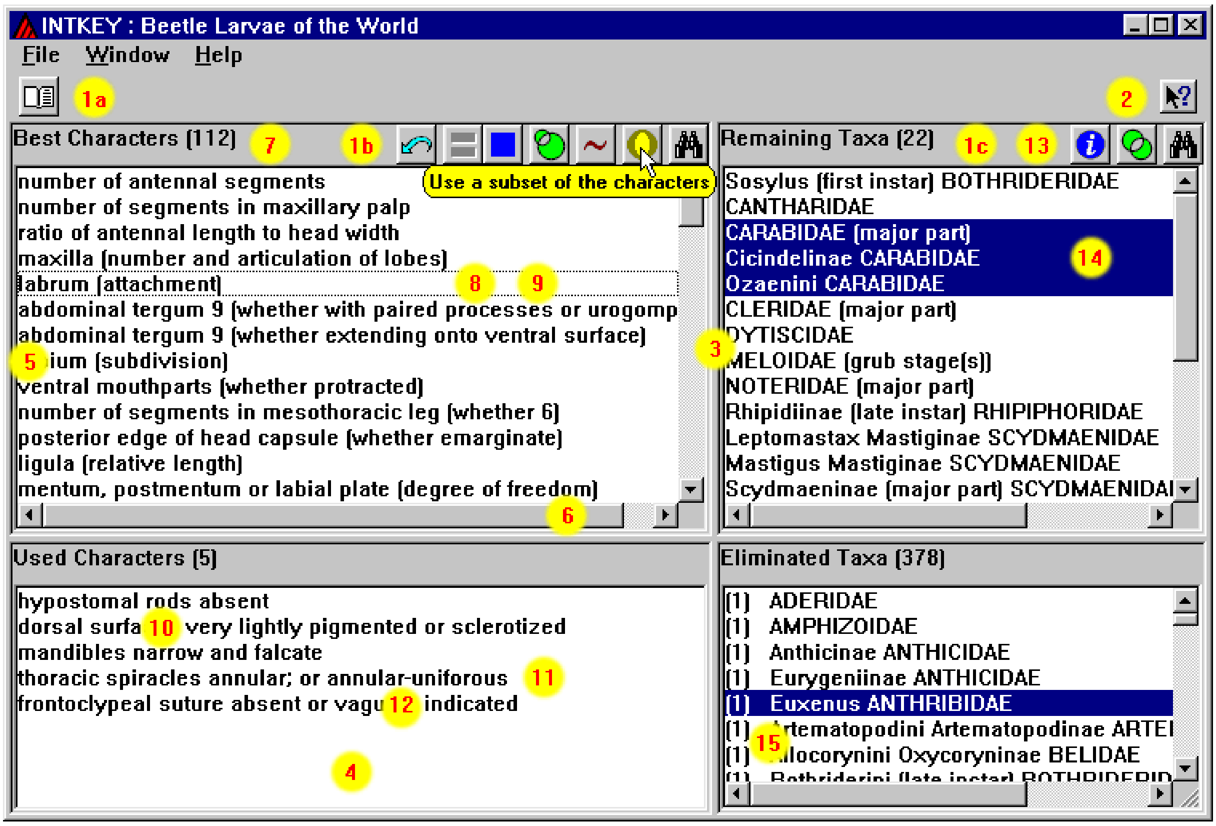
The versions compared are Intkey 5.10 (August 2000), and Lucid 1.5 Build 18 (September 1999). The main screen of Lucid 2.2 (July 2002) differs only in cosmetic details — the design of the buttons, the positioning of button hints, and a slightly different set of buttons in the toolbar.

For a detailed comparison of these and several other programs, see ‘Dallwitz, M. J. 2000 onwards. A comparison of interactive identification programs. http://delta-intkey.com’.

The numbers superimposed on the screen images indicate corresponding features, which are described in the notes below.



INTKEY : Beetle Larvae of the World

Best Characters (112)

Use a subset of the characters

number of antennal segments
number of segments in maxillary palp
ratio of antennal length to head width
maxilla (number and articulation of lobes)
labrum (attachment)
abdominal tergum 9 (whether with paired processes or urogomp
abdominal tergum 9 (whether extending onto ventral surface)
ium (subdivision)
ventral mouthparts (whether protracted)
number of segments in mesothoracic leg (whether 6)
posterior edge of head capsule (whether emarginate)
ligula (relative length)
mentum, postmentum or labial plate (degree of freedom)

Remaining Taxa (22)

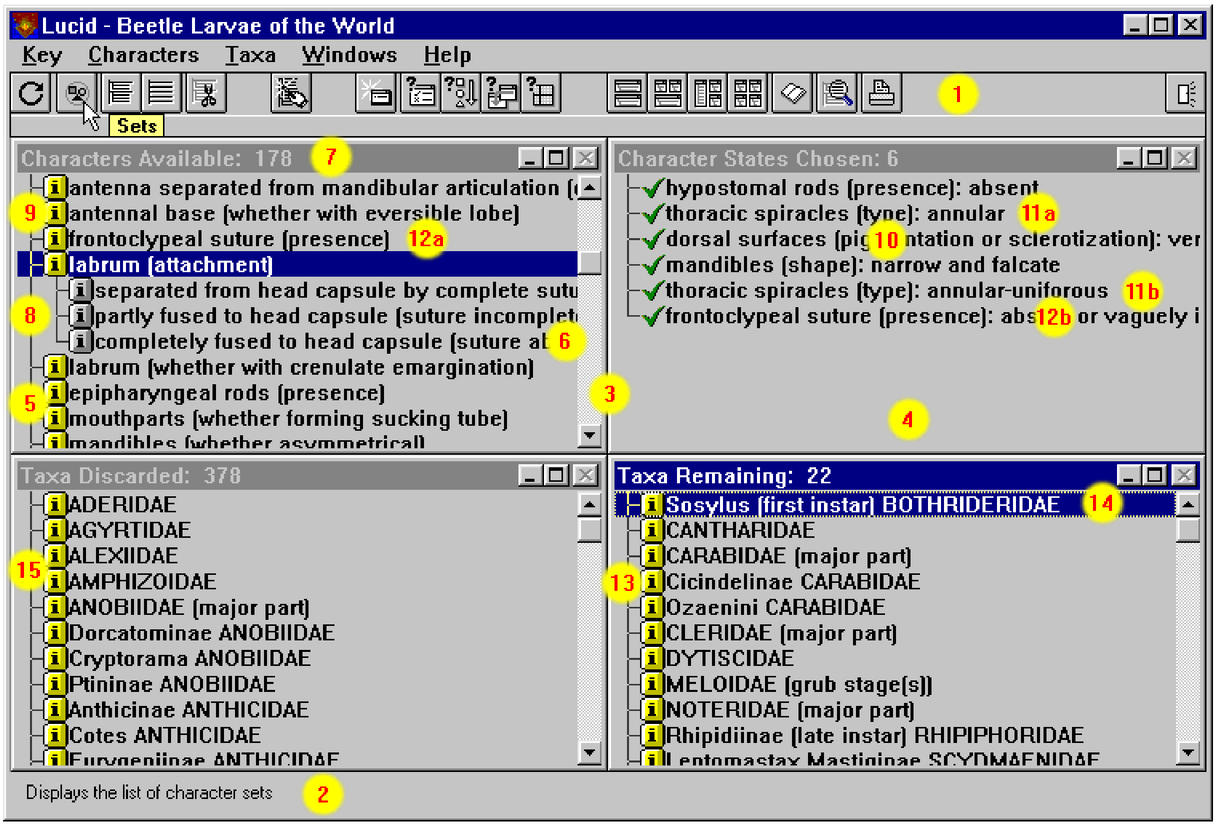
Sosylus (first instar) BOTHRIDERIDAE
CANTHARIDAE
CARABIDAE (major part)
Cicindelinae CARABIDAE
Ozaenini CARABIDAE
CLERIDAE (major part)
DYTISCIDAE
MELOIDAE (grub stage(s))
NOTERIDAE (major part)
Rhipidiinae (late instar) RHIPIPHORIDAE
Leptomastax Mastiginae SCYDMAENIDAE
Mastigus Mastiginae SCYDMAENIDAE
Scydmaeninae (major part) SCYDMAENIDAI

Used Characters (5)

hypostomal rods absent
dorsal surfa very lightly pigmented or sclerotized
mandibles narrow and falcate
thoracic spiracles annular; or annular-uniforous
frontoclypeal suture absent or vagu indicated

Eliminated Taxa (378)

[1] ADERIDAE
[1] AMPHIZOIDAE
[1] Anthicinae ANTHICIDAE
[1] Eurygeniinae ANTHICIDAE
[1] Euxenus ANTHRIBIDAE
[1] rtematopodini Artematopodinae ARTEI
[1] locorynini Oxycoryninae BELIDAE
[1] Bothriderini (late instar) BOTHRIDERID



Characters Available: 178

- antenna separated from mandibular articulation (
- antennal base (whether with eversible lobe)
- frontoclypeal suture (presence)
- labrum (attachment)
  - separated from head capsule by complete sutu
  - partly fused to head capsule (suture incomplet
  - completely fused to head capsule (suture ab
- labrum (whether with crenulate emargination)
- epipharyngeal rods (presence)
- mouthparts (whether forming sucking tube)
- mandibles (whether asymmetrical)

Character States Chosen: 6

- ✓hypostomal rods (presence): absent
- ✓thoracic spiracles (type): annular
- ✓dorsal surfaces (pig ntation or sclerotization): ver
- ✓mandibles (shape): narrow and falcate
- ✓thoracic spiracles (type): annular-uniforous
- ✓frontoclypeal suture (presence): abs or vaguely i

Taxa Discarded: 378

- ADERIDAE
- AGYRTIDAE
- ALEXIIDAE
- AMPHIZOIDAE
- ANOBIIDAE (major part)
- Dorcatominae ANOBIIDAE
- Cryptorama ANOBIIDAE
- Ptininae ANOBIIDAE
- Anthicinae ANTHICIDAE
- Cotes ANTHICIDAE
- Eurygeniinae ANTHICIDAE

Taxa Remaining: 22

- Sosylus (first instar) BOTHRIDERIDAE
- CANTHARIDAE
- CARABIDAE (major part)
- Cicindelinae CARABIDAE
- Ozaenini CARABIDAE
- CLERIDAE (major part)
- DYTISCIDAE
- MELOIDAE (grub stage(s))
- NOTERIDAE (major part)
- Rhipidiinae (late instar) RHIPIPHORIDAE
- Leptomastax Mastiginae SCYDMAENIDAE

Displays the list of character sets

1. Toolbars

Intkey. Three toolbars: (a) user-definable (buttons can represent any operation or sequence of operations); (b) characters and identification; (c) taxa and information.

Lucid. A single toolbar. Definition of buttons by the user not possible.

2. Extended help for toolbar buttons

Intkey. Available in separate window via ‘?’ button. Length unlimited.

Lucid. Automatically displayed at bottom of screen. Length limited.

3. Subdivision of main window

Intkey. Main window subdivided into panes, allowing easy resizing of subdivisions. Default sizes of the panes are chosen for efficient use of screen space.

Lucid. Main window subdivided into windows, making resizing cumbersome. Default sizes of the windows are equal.

4. Order of subdivisions of main window

Intkey. Character panes on left, taxa panes on right. This allows efficient use of screen space (character text is usually longer than taxon text).

Lucid. Character windows at top, taxon windows at bottom.

5. Structure of lists

Intkey. Simple lists.

Lucid. Trees.

6. Horizontal scrolling

Intkey. Horizontal scrolling of panes allows long lines to be viewed.

Lucid. No horizontal scrolling — long lines are truncated.

7. Default order of available characters

Intkey. Best order.

Lucid. Natural order.

8. Character selection

Intkey. Character selection causes display of separate state-selection window (not shown). This allows identical operation from text and image state-selection windows.

Lucid. Character selection causes display of states in the same window, as branches of the tree.

9. Character images

Intkey. Accessed automatically, if available, when character is selected.

Lucid. Accessed by clicking on ‘Information’ button adjacent to the character or state.

10. Omission of redundant words

Intkey. Redundant words are omitted from the ‘Used Characters’ pane, allowing more text to be seen without scrolling.

Lucid. Redundant words are not omitted from the ‘Character States Chosen’ window.

11. Multiple states of a character

Intkey. In the ‘Used Characters’ pane, multiple states of a character are displayed on a single line.

Lucid. In the ‘Character States Chosen’ window, multiple states of a character are displayed on separate lines. These lines are not necessarily contiguous.

12. Available/Used characters

Intkey. Used characters are displayed only in the ‘Used Characters’ pane.

Lucid. Used characters are displayed in the ‘Characters Available’ window, as well as in the ‘Character States Chosen’ window.

13. Taxon information

Intkey. Obtained via a button in the toolbar.

Lucid. Obtained via a button adjacent to each taxon name.

14. Taxon selection

Intkey. Multiple taxa can be selected in the taxa panes (which behave as a single list for this purpose), and any operation can be applied to the selection.

Lucid. Only a single taxon can be selected in the taxa windows. Multiple selections must be made in ad hoc dialogs.

15. Number of differences

Intkey. The ‘Eliminated Taxa’ pane (and the ‘Remaining Taxa’ pane, if the error tolerance is non-zero) displays the number of differences between the specimen and each taxon, and the taxa are sorted on this value.

Lucid. The number of differences between the specimen and each taxon is not displayed, or used to sort the taxa.