TransektCount 1.3.8

1. Introduction

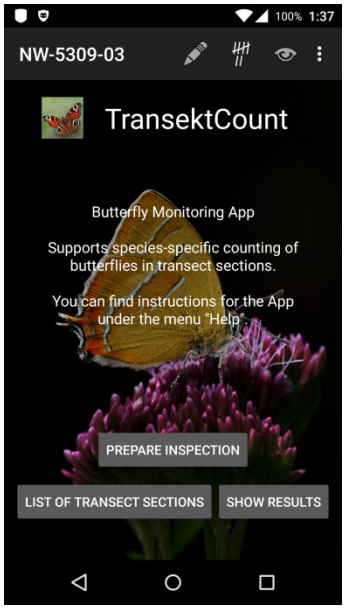

Fig. 1: Starting page

TransektCount is an Android app that supports transect counters in nature preserving projects according to the Butterfly Monitoring Scheme methodology (Fig. 1). It allows a species-specific counting per transect section. It can substitute your field book and pencil, and with a modern smartphone you carry a camera for pictures of interesting species anyway.

The integrated database is organized according to a transect inspection. That means, there will be used a new database instance per inspection.

Databases can be individually created and adapted regarding transect sections and expected butterfly species. The recorded data (meta data, counts and remarks) may either be read on the smartphone or transferred to a PC for your own processing.

The app is open source, has no tracking or advertising functions, demands only for storage access permits which are needed for im-/exporting the data and is published on https://github.com/wistein/TransektCount.

2. Set up

Before initial use you must set up an empty basic database (Basic DB). Therefore, you first enter the meta data of the transect. Tap on “Prepare Inspection” and enter at least the transect-No. and the inspectors name (Fig. 2). Then create a species list for the first transect section. Use the (+)-Button or the function "New Section" respectively from the “List of Transect Sections” menu for that (Fig. 3). Then enter a name for the 1st list (e.g.: Sect 01) and save it.

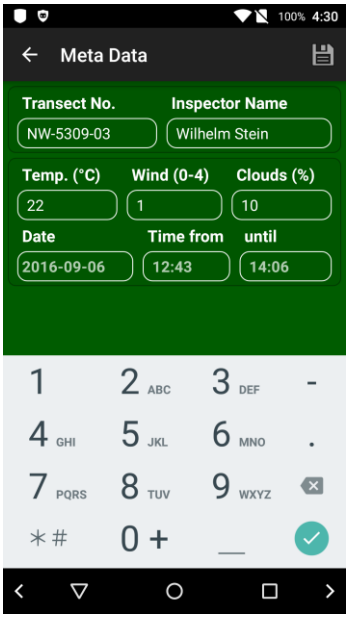

Fig. 2: Create new section list

Fig. 3: Edit new section list

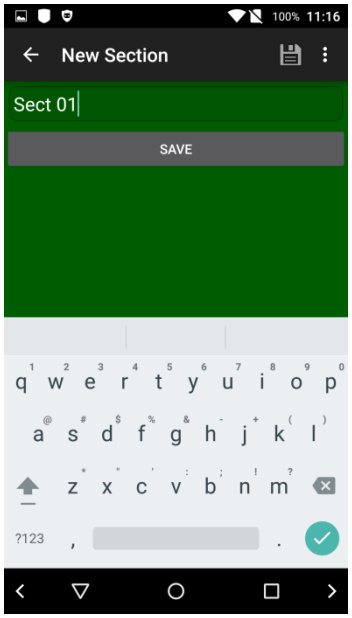

Fig. 4: Enter new section

Subsequently tap on that new entry in the list of transect sections to open the respective counting page and use the edit function to enter all expected species names and codes, e.g.:

```
Sect 01
---------------------------
Pieris napi             07000
Pieris rapae            06998
Pieris na./ra.-compl.   07000*
...
```

The codes will be used as an option to sort the list. The trailing *-symbol marks a species group. With "Save List" you get it stored into the database. This list can be changed or supplemented anytime afterwards by the Edit function of the corresponding counting page.

Once this list is complete, you can copy it for all remaining transect sections (section counting page menu: “Duplicate Section List”, Fig. 5) and name each accordingly (e.g.: Sect 02, Sect 03,...).

When you have created the section lists for all transect sections, the database is ready for export as a "Basic Database". Therefore you find the function "Export as Basic DB" in the menu of the starting page. After that you have a copy of the empty database saved as "Basic Database" (transektcount0.db) within the home directory /sdcard (or /sdcard0, or /storage/emulated/0, it differs between smartphone models or Android versions).

The Basic DB will be used as a template for further transect inspections in future. The Basic DB may be modified any time later, e.g. for changes in species lists and exported. All inspection related data will be ignored for an export as Basic DB.

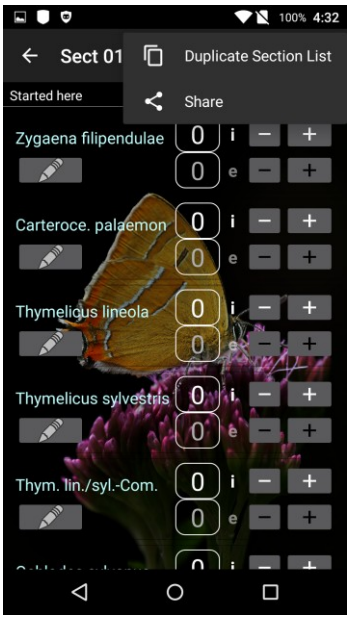

Fig. 5: Counting page

Fig. 6: Section list

3. Usage

Start with the “List of Transect Sections” (Fig. 6). Select the relevant transect section. The counting page appears (Fig. 5).
As it ought to be distinguished between counts of butterflies within the imaginary count area and butterflies outside this area you have 2 separate counters ("i" for internal and "e" for external).
To count just tap on either the internal or external "+"-Button of the corresponding species. The "-"-Buttons allows for corrections.

While storing the counting results of a section the current date and time of the inspection will be stored either. The date and a possible section remark will then be shown in the list of sections.

The Pencil-Button in the app bar of the counting page opens the section editing page (Fig. 7) for adding remarks for the section and editing the names of section and species. The section related remarks will be shown on top of the species list and within the section list.

The Pencil-Button in each species row of the counting page opens the species editing page (Fig. 8) that lets you add remarks for each species and set its intern counter to any value. Here you may also set pop-up alarms which show up while reaching a set value on the corresponding internal counter (e.g. to realize already on site if a certain species is more abundant than on a previous inspection).

If you enter a species related remark this will be shown on the counting page in an extra line beneath the species row.

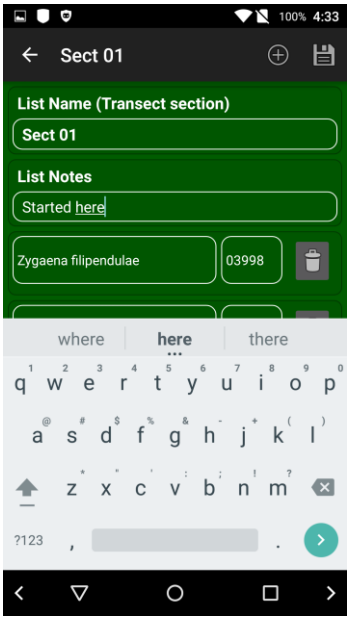

Fig. 7: Edit section

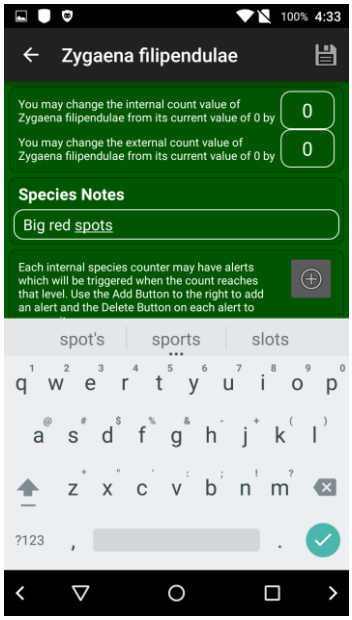

Fig. 8: Edit species

To move back one page you can use the arrow in the left upper corner. You should leave TransektCount always from its starting page, as in this state the database is safely closed.

Nearly each app page has its specific context menu. You can activate it with the 3-point-symbol in the upper right corner.

When you have large lists or have collected big amounts of data the app may delay the start of pages, especially when entering a transect section list (the counting page) or the result page, as those need heavy calculations.

Finally, there is a page showing your results (Fig. 9). Here you see beneath the meta data of the inspection the species which got counts. You open this page from the Starting page with the "Show Result"-Button or the Eye-symbol in the app-bar. It may take a few seconds to show up.

4. Further functions

The menu on the starting page (Fig. 10) has Settings, Reset, Import, Export, Info and Help functions.

The "Settings" page (Fig. 11) can be reached from some pages of the app. Here you may adapt the look an feel in some aspects to your wishes, e.g. sounds, alerts or left-/right-hand counting page.

Selecting an own background picture can be achieved by the Gallery App, accessible in the left side menu of the background option (if applicable wipe from the left edge)..

For preparing a new inspection you may use “Reset Data” to reset the inspection-specific meta data and count data. Alternatively you may import the Basic DB from /sdcard/transektcount0.db

Fig. 9: Counting Result

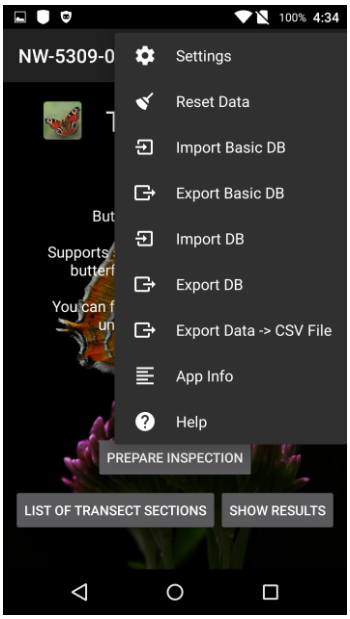

Fig. 10: Starting page menu

Internally, TransektCount stores the data always in a single, equally named SQlite-DB file in the app’s own storage area. As this file cannot be read or changed directly by the user, exporting the data to files in a user reachable storage area is necessary.

By “Export Basic DB” you may export the DB as empty "Basic DB" which is reasonable, when to take into account changes of the transect structure or new species you may have entered (see "2. Settings"). “Import Basic DB” just reads the file transektcount0.db.

You may import any previously exported TransektCount-DB (Fig. 12). This supports monitoring of different transects. To achieve this you may create transect-specific Basic DBs which may be renamed by a file manager into e.g. transektcount1.db, transektcount2.db, etc. (Mind: The db file name must start with the string “transektcount”, otherwise it cannot be imported).

Exporting the current database (Export DB) writes a copy of the complete DB to

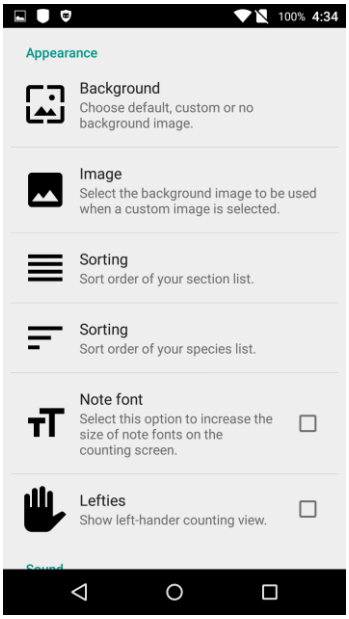

Fig. 11: Settings

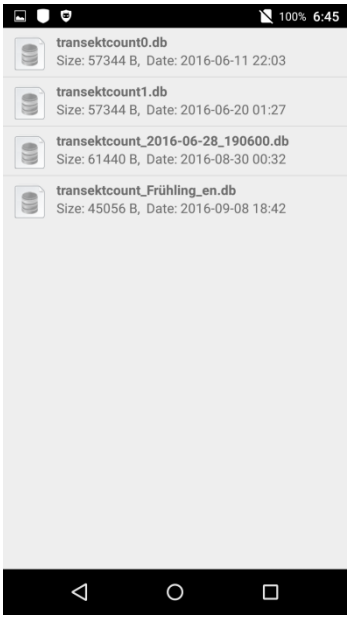

Fig. 12: Import file selection

/sdcard/transektcount_YYYY-MM-DD_
hhmmss.db. (The file naming scheme is transektcount_date_time.db). For your own purpose you can rename the exported TransektCount DB files within the previously mentioned conventions.
The function “Export Data -> CSV File” writes the meta data and the counting results into a MS Excel readable .csv-file to /sdcard/transektcount_YYYY-MM-DD_hhmmss.csv.

And you may find under "App Info" the email address of the author, the history of the app and the license note.

The menu of the “List of Transect Sections” allows you to create new section lists. This function will be used only while creating a transect Basic DB or when there are changes in a transect.

The counting page of a selected section list provides the "Duplicate Section List" function. This function is used while creating a Basic DB, as described under "2. Set up“.

The menu of this page provides a "Share" function for sending notes using a standard app like SMS or email.

From Android version 5.0.1 on, the counting page is switched off when the phone is put into a pocket.

IT-affine users may transfer the exported "transektcount_YYYY-MM-DD_hhmmss.db" or “.csv” files to a PC.

With the free tool "SqliteBrowser" (sqlitebrowser.org) you may examine the db-file.

The .csv file may be imported as a

- comma-delimited text file with
- quotations marks for textfield recognition and
- file origin “Unicode UTF-8”

into Excel for further processing.

Fig. 13 shows the csv formatting parameters for a correct representation in the Android app PlanMaker Mobile Free.

Fig. 14 shows part the imported .csv-table

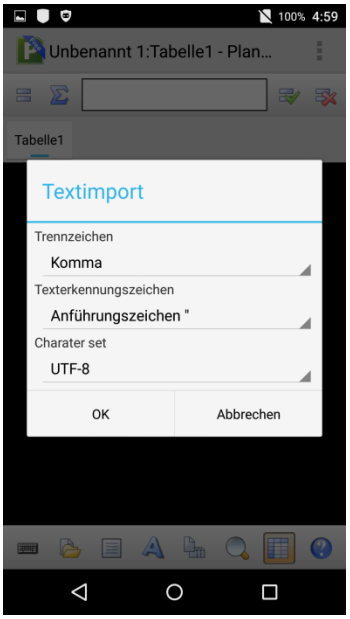

Fig. 13: Text import parameters

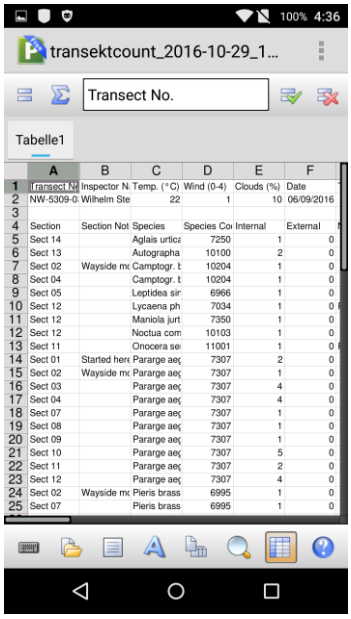

Fig. 14: Imported .csv-table