HOBO connect: air temperature and humidity data

This tutorial explains how to connect to and download climatic data from a HOBO logger (OnSet, US).

A HOBO logger is a small and practical sensor that measures air temperature and humidity in real-time. The cool thing is that it can be controlled using a mobile phone or tablet that has Bluetooth and GPS position.
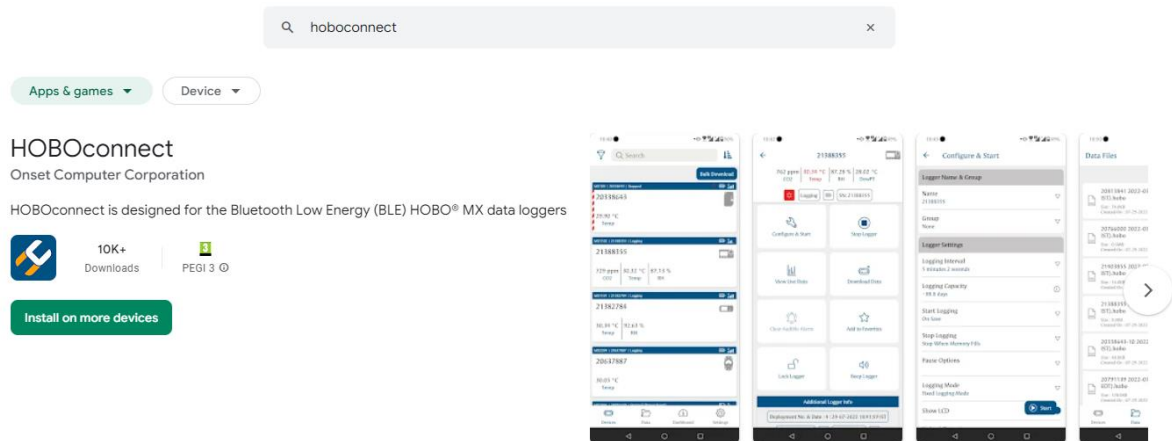

Our loggers are "hidden" in a white plastic shield, which protects them from solar radiation to avoid extreme air temperatures when the sun is shining directly on them.

MX2301A Model Shown

To connect and download data from the HOBO loggers, follow these steps:

1. Download the **HOBOconnect app** from the Appstore or PlayStore to your Android or Apple phone or tablet. When installing the app, you will need to allow access to your location and files.
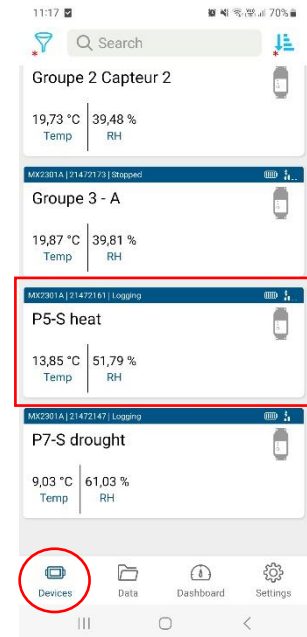

2. Turn on your Bluetooth and GPS location.
3. Open the app. You will have the following icons on the main page:

Devices	View and connect to the HOBO loggers. Here you will see all the loggers that are available for connection next to you. If you don't see the one you are looking for, you might need to go closer to it.
Data	Here you can see all the data you downloaded from a HOBO after connection. If you tap on one file, a graph of the measurements will appear. If you tap on the graph, you can see the measurement values at the position you selected. From here, you can also export and share your data in excel format and send them to you, for example by email, or put them on a drive.
Dashboard	Here you can customize a dashboard to quickly see the latest measurements for nearby loggers. You don't really need this.
Settings	Here you can change the app settings and get information about the app itself.

4. Connect to your HOBO logger:
   - Go on the **Devices** page.
   - You will see a list of sensors with their model number (MX2301A), their serial number (21472161), their status (*Logging* = working, *Stopped* = <u>not</u> working), their name (P5-S heat) and real-time air temperature (Temp, °C) and relative humidity (RH, %) values.
   - These are the sensors that are in your proximity. Scroll down to find the one you want. If you don't see it, go closer to the logger with your phone or tablet.
   - **The HOBO loggers for our practical of Fundamentals in Ecology have the following info:**

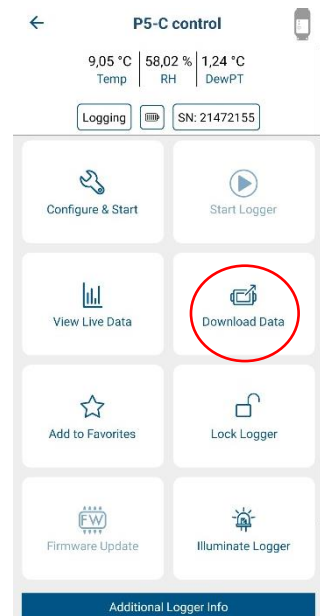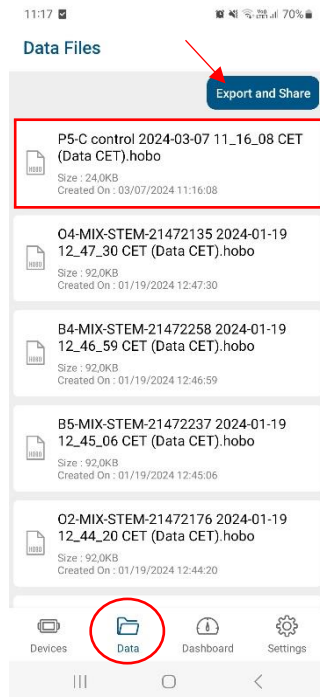| Treatment	HOBO name	Serial number	Location
control	P5-C control	21472155	grassland
warming	P5-S heat	21472161	greenhouse
drought	P7-S drought	21472147	rain shelter

Note: the first time you connect to a logger, you might not see the name, but only the serial number or a different name. Check the serial number to be sure you are connecting to the right one. After the first connection, you will see the names written above.

   - Choose the HOBO you are interested in and **tap on it to connect**.

5. Download your data:
   - Once you are connected, you will see this screen.
   - **DO NOT tap on Configure & Start, as this will delete all the collected data!**
   - If you want to see the current measurements, tap on View Live Data and a graph will appear.
   - To download the data, tap on the **Download data** icon.
   - Once the download is completed, return back to the main page and tap on **Data**.

- Here, you will find all the files you downloaded with the name of the HOBO logger and the date. Each time you download the data, the file will include all the measurements from when we started the HOBO until the current day.
- Tap on **Export and share**, select your files and then tap on **Export files** at the bottom of the page. Select the <u>XLSX</u> format. You can export multiple files at once.
- Once the export is done, tap on **Share.** Choose the option you prefer to send your data to yourself or your group.

That's it! Have fun with your climatic data! 😊

P.S. If you notice that a HOBO logger is not working, please let us know! We will solve the problem :)