TO RUN MESQUITE ON WINDOWS

PREREQUISITE: JAVA
To start Mesquite, you need Java installed. The version of Mesquite you have here runs on Java 1.8, or higher. We have tested it most under Java 1.8. You can get Java 1.8 from java.com. You can get newer versions of Java from java.oracle.com.

STARTING MESQUITE
To start Mesquite, double click on one of these apps or executable files:
Mesquite_Starter_E1.exe (or **E2**, **E4**) — These are more likely to work with older
          Javas; choose 2 or 4 for more memory.
Mesquite_Starter_K1.exe (or **K2**, **K4, K8**) — These are more likely to work with newer
          Javas; choose 2, 4, or 8 for more memory.
Mesquite_Starter_S.bat — This is for power users or if all else fails.

We recommend that you first try E or K starter apps (E1, E2, E4, K1, K2, K4, K8). If those don't work, then try the S starter to customize how Mesquite starts up.

In general, we expect the E starters to work on older systems and versions of Java. The K starters are more likely to work on newer systems.

NEED MORE MEMORY?
If you are using Mesquite for large data files you may need to request more memory. You can do this by choosing the E2/E4/K2/K4/K8 starters instead of the E1 or K1 starter.

SOME DETAILS, AND CUSTOMIZATION
These starter apps are in the Mesquite_Folder, and should stay in that same place in Mesquite_Folder. These double-clickable apps do not hold all of Mesquite's working code; they just get the code started. The working code is distributed among various files in Mesquite_Folder.

We give you multiple Starter apps because some may not work for you. Recent changes to Java make it challenging for us to supply a single version that works everywhere.

If you need to take control of the startup process directly, use the Mesquite_Starter_S.bat, which is a script file that starts Mesquite. To use this file effectively, you may need to edit it with a text editor, which would require knowledge of technical details of paths and flags. Running Mesquite with Java 16 requires this flag passed to the JVM:
```
--add-opens java.base/java.net=ALL-UNNAMED
```

WHY IS THIS SO MESSY?
Transitions in Java have generated varied operating conditions for Mesquite. Java has not only increased its security but also split into two streams, the open-license OpenJDK (Java 8/1.8 and below) and the restricted-license newer versions of Java.

This forces us to maintain multiple versions (e.g., what works on Java 16 will not work on Java 8). The problems are usually nothing to do with the basic functioning of Mesquite as a program for evolutionary biology. It's almost only about getting Mesquite to simply start.

If you are technically inclined, and find a way to build a starter app that bypasses whatever is the latest challenge thrown our way, please share it with the Mesquite community!