3I installation on Windows 7.
http://ctap.inhs.uiuc.edu/dmitriev/
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The 3I installation package includes
1. Two Microsoft Access database files: **3i.mdb** database with blank standard tables and forms (to store information on nomenclature, characters, specimen records, bibliography, links to illustrations, etc.), and **3iVisit.mdb** database (to store preferences and visit statistics; this file may not be edited);
2. A set of ASP or Active Server Page files, which will display this information on the web site and allow the end user to query the database through the Internet;
3. Several DLL (Dynamically-Linked Libraries) files, which provide additional functionality facilitating, for example, creation of dynamic distribution maps.

To make your product accessible to end users through the Internet you will need to place all of these components plus, if desired, illustrations and custom maps on a Web server (ask your network administrator and/or webmaster to help with this). This should be done after the database has been populated with data on the nomenclature, morphology, and distribution of the included taxa. Building and modifying the database (i.e., entering data and illustrations) is done on your local computer. Data become accessible by copying the database files on the Web server. You may continue to build your database on your local computer. When ready to update the live, Internet-accessible version, simply replace the older database file on the server with a copy of the updated file from your local computer.

Because 3I relies on a Web server to create custom interfaces on the fly (e.g., for interactive keys, database searches, etc.), in order to view the interfaces during development (and before you provide live access through a Web server) it is necessary to set up your local computer so that you can view the interfaces on this computer, via a Web browser, exactly as they will appear on the Internet. This is strongly recommended so that problems may be identified and corrected before the files are moved to their final destination on a Web server. The following instructions describe how to set up the Internet Information Services on the Windows 7 operating system to work with your web product locally. Once these have been set up, you will be able to view and test your interactive key or database in your Web browser, whether your computer is online or offline. Other people will not be able to access the product via the Internet or local network at this stage, so you can work in peace. Before setting up the web services on your computer, make sure you have installed all critical Windows updates from Microsoft web site. So far, the 3I program was successfully installed on machines with Windows 7 Home Premium and Business editions. It should also work with Windows 7 Ultimate edition, but it is not supported by Windows 7 Home Basic edition which lacking components necessary for installation. The program can be also installed on Windows 2000 Professional, Windows XP Professional, and Windows Vista; but the installation process may be slightly different.

Installation.

1. Start Internet Information Services on Windows 7: **Start Menu > Setting > Control Panel > Programs and features >** Click on Tab **Turn Windows feature on or off >** Tickle the checkbox near **Internet Information Services (IIS) component**; open Internet Information Services and check the checkbox near **ASP, Server-Side Includes, Default Document,** and **Static Content**.
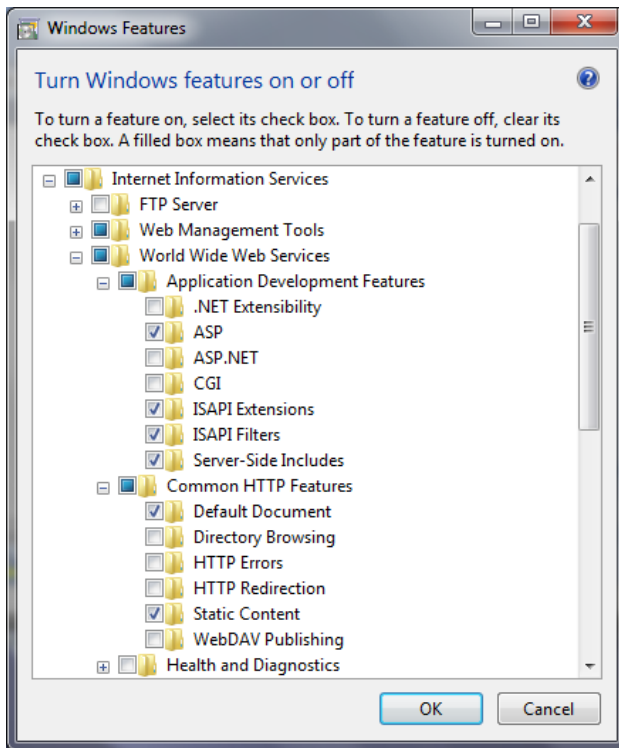
Confirm selection pressing **OK** (sometimes Windows installation CD required to activate Internet Information Services).

2. Create a folder to store Web related databases. It can be any folder, with any name, placed on any drive. I recommend "**wwwDB**" folder on C: disk (**C:\wwwDB**).
3. Copy two databases (**3i.mdb** and **3iVisit.mdb**) and 3 DLL files (**dynimage.dll, NETDLL.dll, obout_ASPTreeView_XP.dll**) to the **C:\wwwDB** folder (all files from the 3I_internetDB folder of installation package).
4. Check the folder properties: **Start Menu > Control Panel > Folder Options >** Tab **View >** Option **Use Sharing Wizard** (last option) should be checked.
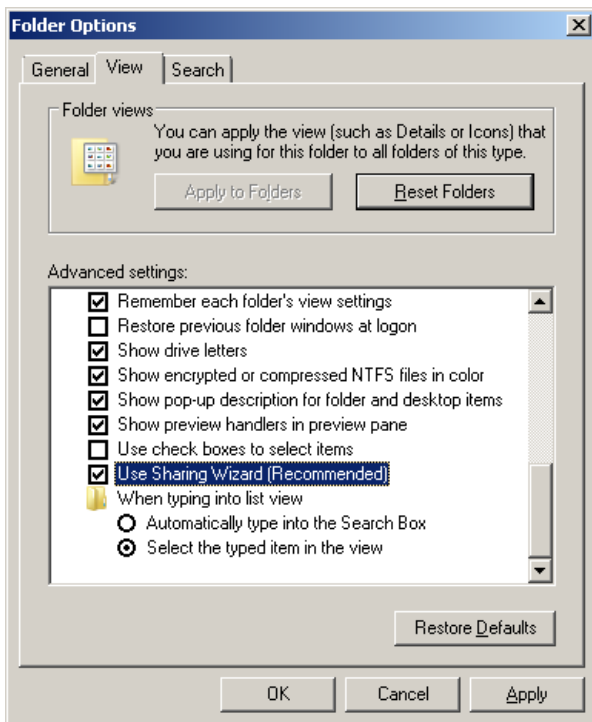
Close Folder Options.
5. Check the Properties of the **wwwDB** folder: **My Computer > C: Disk** > select **wwwDB** folder > **File > Properties** > Tab **Security > Edit**. Check if the group "Users" present there. If not, click **Add** button, type "Users", and press **OK**. Check option for **Full Control** for **Users group** and press **OK** again.
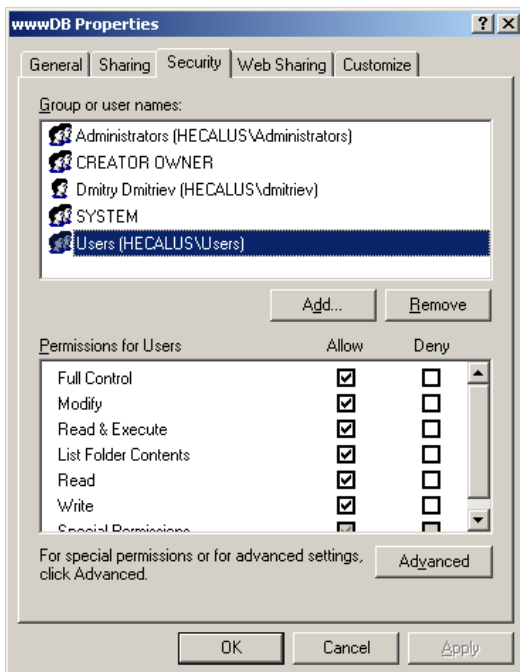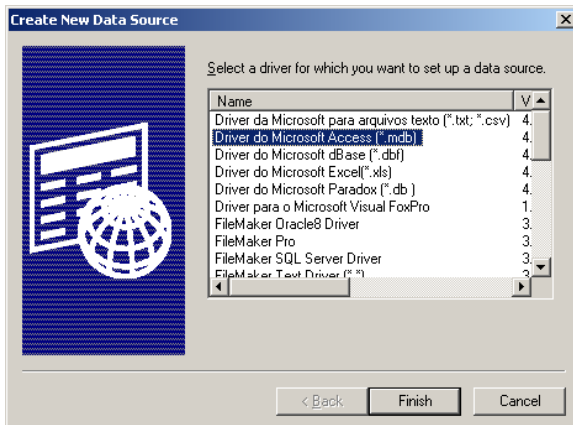

6. Check each database in **wwwDB** folder. Both of them should have **Full control** set up for **Users group**.
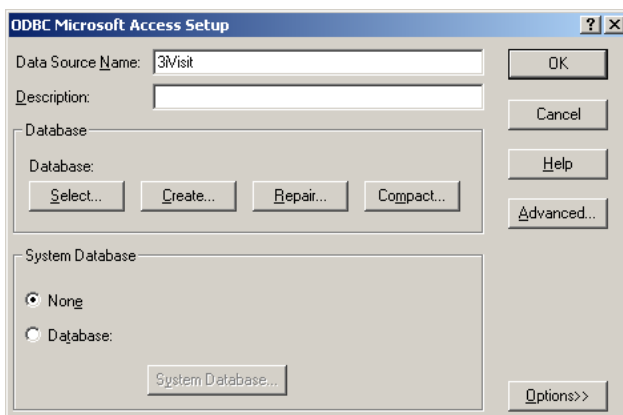
7. Register web databases: **Start Menu > Control Panel > Administrative Tools > Data Sources (ODBS) >** Tab **System DSN** (If you have **Windows 7 64bit** edition, launch the following file instead: **c:\windows\SysWOW64\odbcad32.exe**)
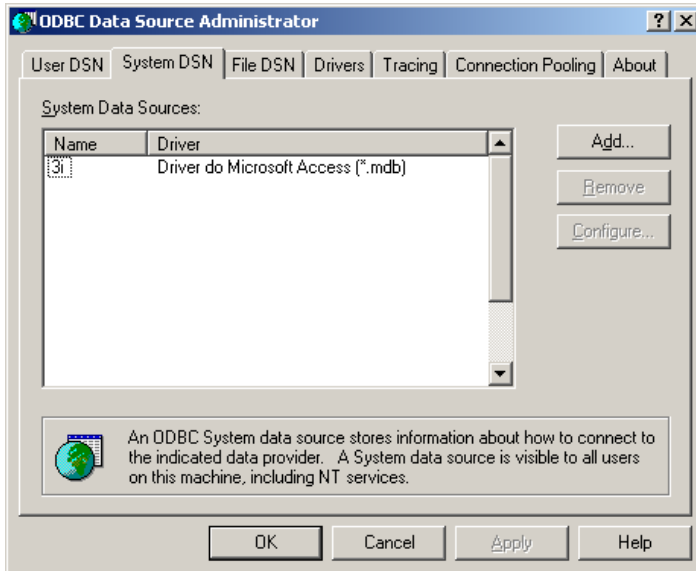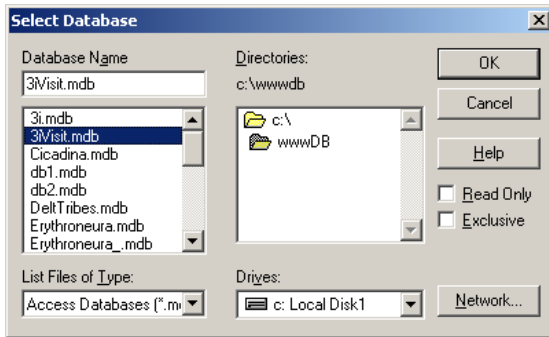

Click **Add**. Select **Driver for Microsoft Access (*.mdb)**.

Type "**3iVisit**" into **Data Source Name**, then click **Select**.

Find **C:\wwwDB** folder, select **3iVisit.mdb** database, click **OK**.

Click **OK** second time to finish the registration process. Click **Add** to register the second database. Select **Driver for Microsoft Access (*.mdb)**. **Data Source Name** (select any name for your database, for example the name of the taxon you are working with. This name will be a part of the Internet address for the interactive keys). Click **Select**, find **3i.mdb** database. Select it, click **OK** two times . Close Data Sources window.

8. Register DLL files. DLL's are Dynamically-Linked Libraries, program modules widely used in Windows. Three DLL's are used in 3I (for example to create dynamic maps). In order to work DLL's must be registered with Windows. There are two ways of DLL registration:

a. Using the Command prompt. In the **Run** command of the **Start Menu** type "**cmd**", then type the following commands in the opened window.
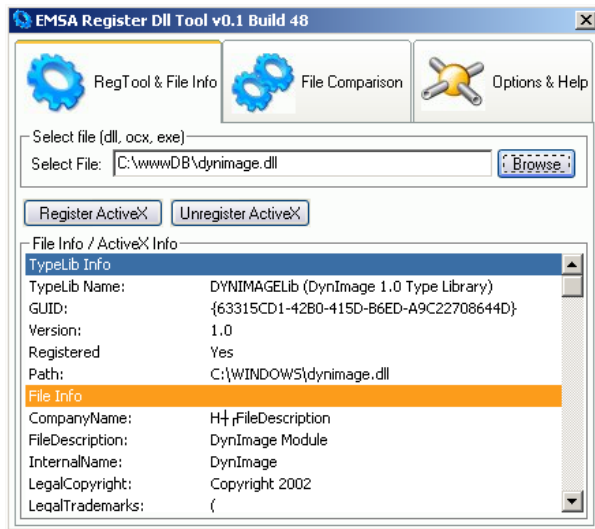

Close the window.

b. The easiest way to register DLL's is to download and use the **Emsa Register Dll Tool** (http://www.shareup.com/Emsa_Register_Dll_Tool-download-25772.html). After Emsa Register is installed and activated, the registration is simple: select one by one all DLL files from the **C:\wwwDB** folder (**dynimage.dll, NETDLL.dll, obout_ASPTreeView_XP.dll**) and click **Register ActiveX**.

After all three files are registered close the registration tool window.

9. Set up the Internet folder. Open the folder **C:\Inetpub\wwwroot** (this folder has been created as a part of the Internet Information Services). Create a new folder inside; for example, "**key**" (C:\Inetpub\wwwroot\key). Copy all the content from **3I_internet** folder (from the installation package) into **C:\Intetpub\wwwroot\key** folder.

10. Set up the properties of the Internet folder. **Start Menu > Control Panel > Administrative Tools > Computer Management.**
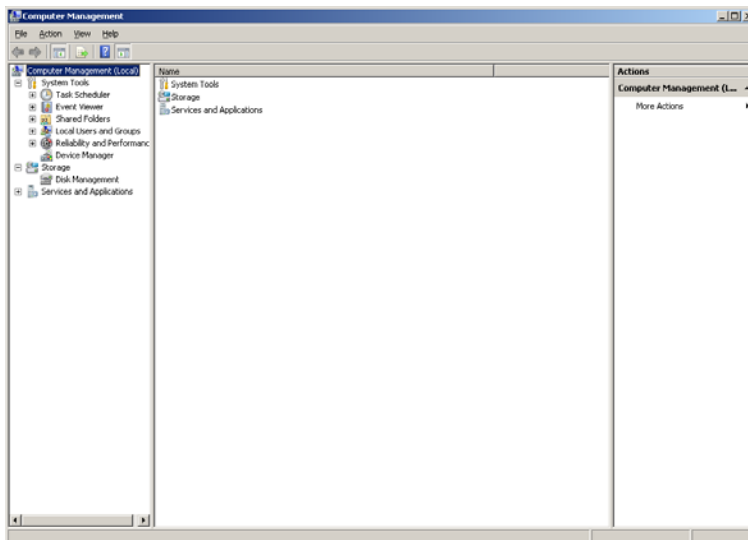
 Open **Services and Applications** List > Open **Internet Information Services** List > Open **Web Sites** List > Open **Default Web Site** List > Select **key** folder (this is the folder you created in step 9) > make a right mouse click on this folder and from the context menu select **Convert into Application** option.
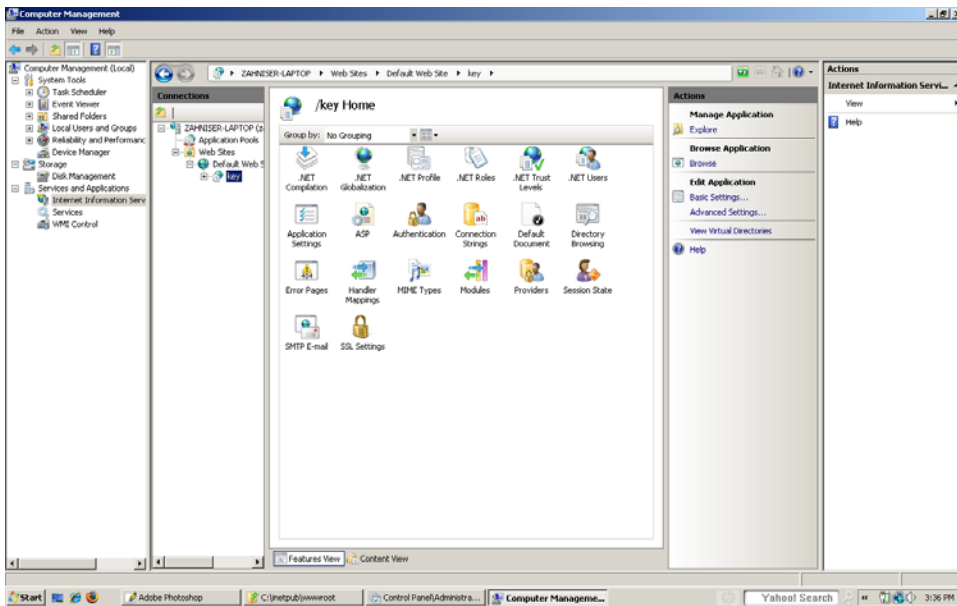
Open **ASP** settings window and select **True** options for **Enable Parent Paths, Enable ASP server-side script debugging**, **Enable ASP client-side script debugging**, and **Send detailed ASP error messages to client >** Press **Apply**.
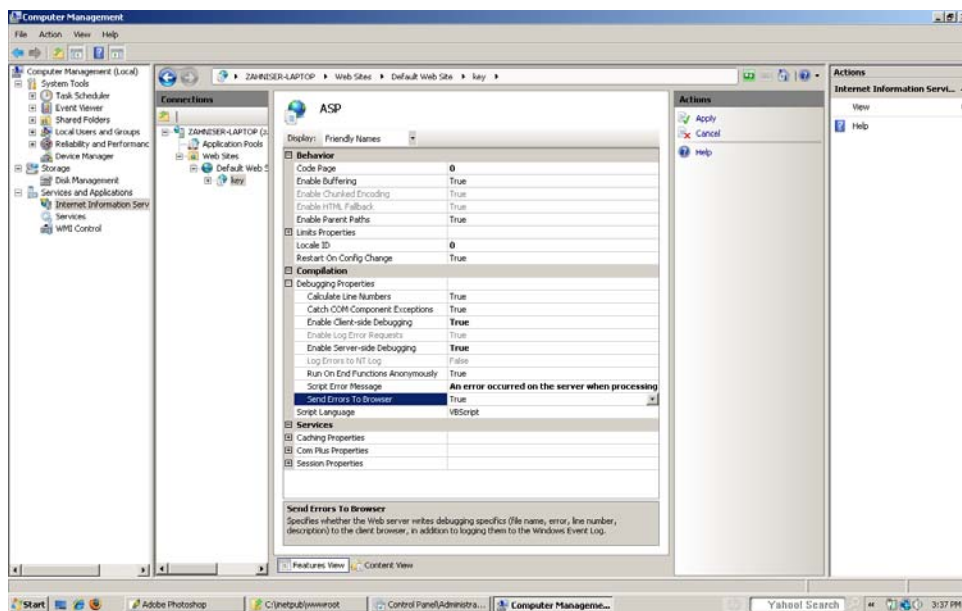
Return to the previous menu (to do this use Back arrow at the top of the central part of the screen) > Open **Authentication** settings > make right mouse click on **Anonymous Authentication** > select **Edit** > Select **Application pool identity** option > press **OK**.

Return to the previous menu (to do this use Back arrow at the top of the central part of the screen) >
Open **Default Document** settings > add **index.asp** as a default web page > Click **Apply**.
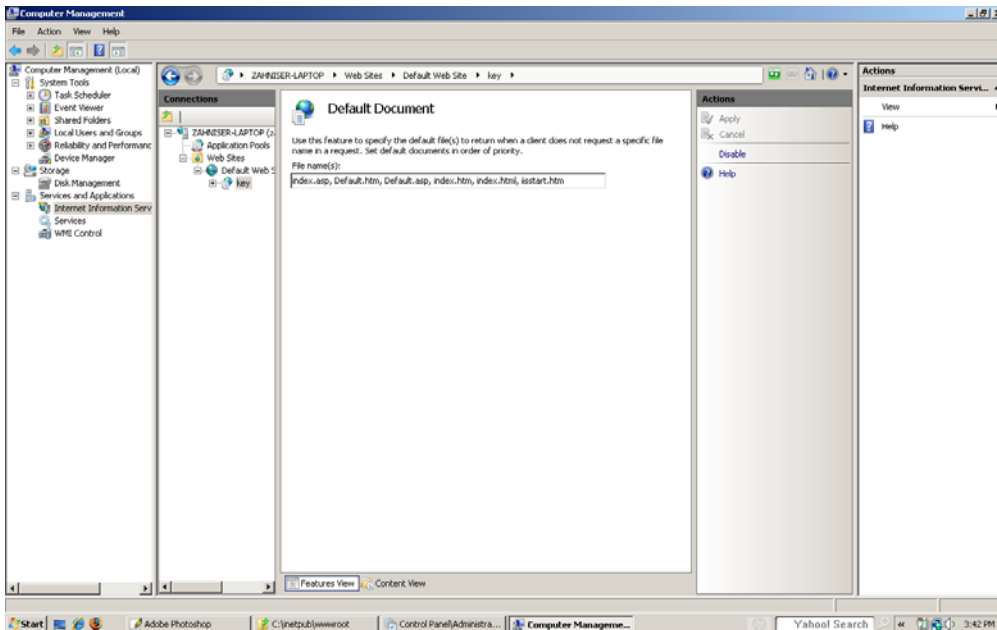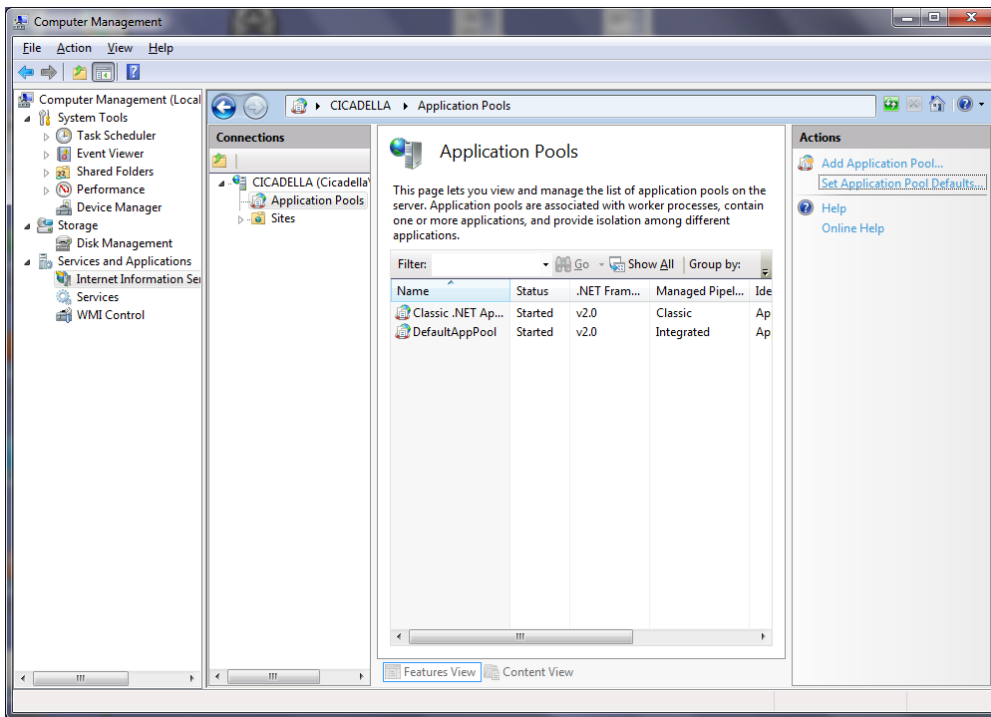

If you have Windows 7 64bit edition, an additional step is required:
Return to the previous menu (to do this use Back arrow at the top of the central part of the screen) > In
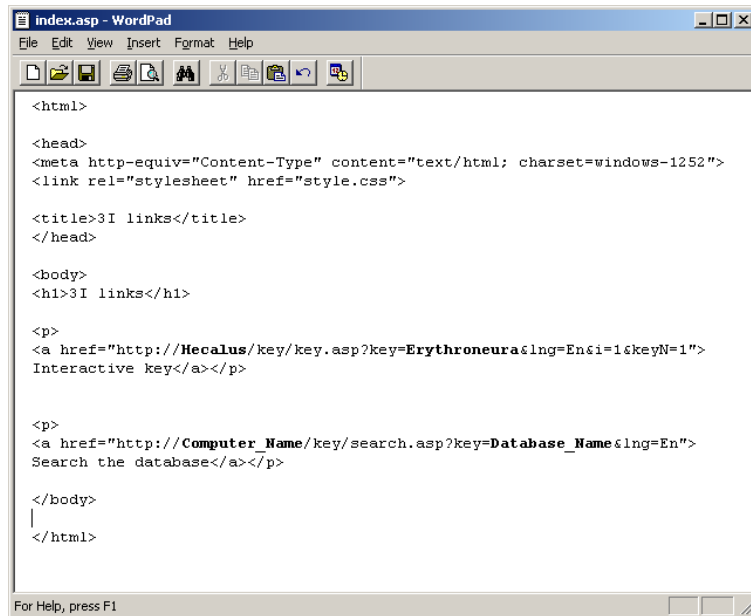the **Connections** part click the link to the **Application Pools**

In the **Actions** section click to the **Set Application Pool Defaults** > Set **Enable 32-Bit Applications** value to **True**.
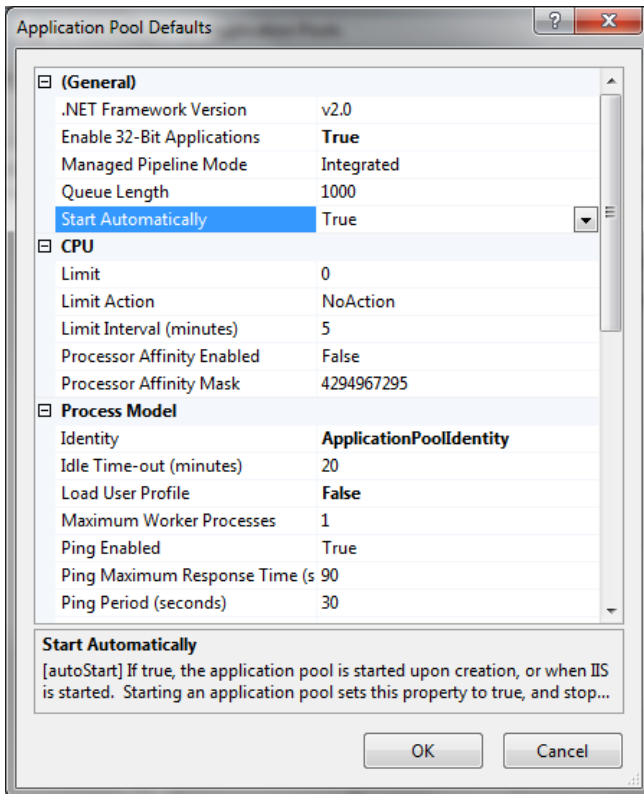
Close Computer Management window.

11. Change setting of your browser to display ASP error messages: **Start Menu > Control Panel > Internet Options >** Tab **Advanced**. Find an option that says "Show friendly HTTP error messages". Uncheck it.

12. Customize **index.asp** (starting page of your web site). Using **NotePad** editor open **index.asp** file from **C:\inetpub\wwwroot\key** folder. In two places replace the "**Computer_Name**" with the real name of your computer (If you do not know the name of your computer, make right click of the mouse on **My Computer** > **Properties** > Tab **Computer Name**). In two places replace the "**Database_Name**" with the nickname of your database (the name used to register 3i.mdb database in the step 7).

```
index.asp - WordPad
File  Edit  View  Insert  Format  Help

<html>

<head>
<meta http-equiv="Content-Type" content="text/html; charset=windows-1252">
<link rel="stylesheet" href="style.css">

<title>3I links</title>
</head>

<body>
<h1>3I links</h1>

<p>
<a href="http://Hecalus/key/key.asp?key=Erythroneura&lng=En&i=1&keyN=1">
Interactive key</a></p>


<p>
<a href="http://Computer_Name/key/search.asp?key=Database_Name&lng=En">
Search the database</a></p>

</body>

</html>
```
For Help, press F1

13. Restart the computer.

14. The Web site is now ready for use. Copy 3i.mdb database from C:\wwwDB folder into any other folder. You will now have two folders with the same database: server folder (C:\wwwDB) and local folder. Never edit the database from the server folder, only from your local folder. Once you have made some updates and want to see the changes using Internet services, just copy the database from your local folder into the server folder. Images illustrating the character states in the interactive key must be placed into **C:\Inetpub\wwwroot\key\images** folder. Images illustrating the taxa must be placed into **C:\Inetpub\wwwroot\key\images1** folder.

15. To test for proper installation and access to your 3I database open an Internet Explorer (or other browser) window. In the address line type: **http://Computer_Name/key/**. Where the Computer_Name is the real name of your computer. Add this hyperlink to the **Favorites** for easier access.

16. Possible complications:
    a. Browser gives and error message, stating that there is an error in **global.asa** file. This was most likely caused by an error during **3iVisit.mdb** database registration. For example, 3iVisit.mdb database does not have **Full access** for **Users** group (check step 5), or the name of the database was misspelled during database registration processes (check step 7).
    b. You cannot see the content of the main page (two hyperlinks). This was most likely caused by a problem during **Internet Information Services** installation or configuration process (check steps 1 and 10).
    c. You can see the main page, but hyperlinks do not work. Most likely the file **index.asp** was not

properly updated (see step 11), or the name of **3i.mdb** database was misspelled during the registration processes (check step 7).

d. First hyperlink opens the interactive key interface, but there are error messages in some frames. Most likely there is not enough data in the database to display the interactive key (an interactive key requires that several taxa be entered into the taxonomic form of the database, taxa should be marked with number 1 to be included in interactive key number 1; several characters and their states should be entered into the Character form of the database and marked with number 1 to be included in key number 1. Terminal taxa should be scored in the Character form and the checkboxes near to the taxon names should be checked in order for the scored taxa to be included in the interactive key. The database should be Updated for the Internet and copied into the **wwwDB** folder.

17. The **3I_example** folder contains **3i.mdb** database with an example interactive key, and two folders with images. To see this key, place **3i.mdb** database into the **C:\wwwDB** folder and copy both image folders into **C:\inetpub\wwwroot\key** folder. Then try the hyperlink from step 13.

Optional setup for web statistics.

1. Open the file **script.txt** using Notepad or another simple text editor and copy the text from this file into each html (or asp) document on your web site (using a word processor to do this may introduce hidden codes and is not recommended). This script collects visit statistics. If you have a frame structure and one of the frames (for example title, or menu) does not change during navigation, you must place the code only into this frame (in 3I, place the code at the end of the name.asp file before the tag </body>). Do not include this script in the main page of the frameset. The script will generate a small transparent image file 1x1 pixel in size. In order to get more adequate statistics, you should place the script as close to the beginning of the document as possible (before any other illustration). It takes time to download illustrations, and users, especially those with modem connections, not always wait until the page is finished loading. If you have difficulty changing the html structure, you can always place the script at the very end of the document. Before the tags **</body>**.

2. The file **stat.asp** shows visit statistics.

3. **Optional**. In order for the program not to calculate numerous visits from the editor of the web site, you can open file global.asa (again, using a simple editor like Notepad). In one of the first lines you should input the IP address of your computer (visits from this address will be excluded from the statistics). You can also input several IP addresses, separating them with commas.
    You should edit the line
    myIP = "XXX.XXX.XXX.XXX,xxx.xxx.xxx.xxx"
    to
    myIP = "111.111.111.111, 222.222.222.222"
    where 111.111.111.111 or 222.222.222.222 are your valid IP addresses.

4. One month after you start using the program, it will start requesting registrations. In order to register, send me an e-mail containing the URL address of your web site and the name of the user. After I have received an e-mail with this information, I will register the program on-line and it will become accessible without any limitations.