



Thank you for participating in the testing phase of our innovative web-based application for identifying Australian native bees. Your contribution is vital to refining this tool, and we appreciate your involvement.

To ensure accuracy and minimize fatigue during the landmarking process, we will provide testing images in sets of 25. After completing each set, please email us at auswingexplorer@gmail.com and we will promptly send you the next batch.

We will provide you with your unique login details, and once received, you are welcome to begin at your convenience. While there is no strict deadline for this testing phase, we would greatly appreciate receiving your results as soon as possible.

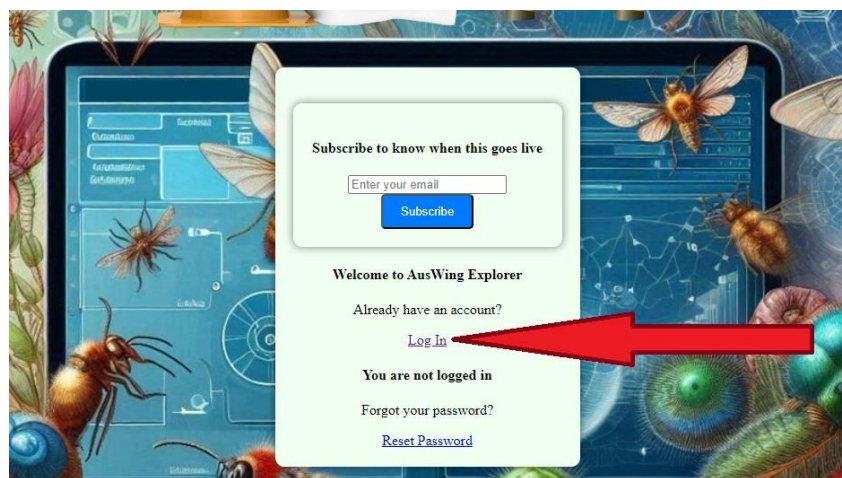
Should you have any questions or require further assistance at any point, please don't hesitate to reach out. Your feedback is invaluable to us.

Step 1

You should have received a zip file containing 25 images. Please unzip these files into an easy to access location.

Step 2

Once you have the image files ready, please then go to this web address <https://auswingexplorer.com.au/> on the home page you will have a login button please click this then a new page will open where you can input your login details. Once entered you will be taken back to the homepage, and you should see the button to begin landmarking.



Log In

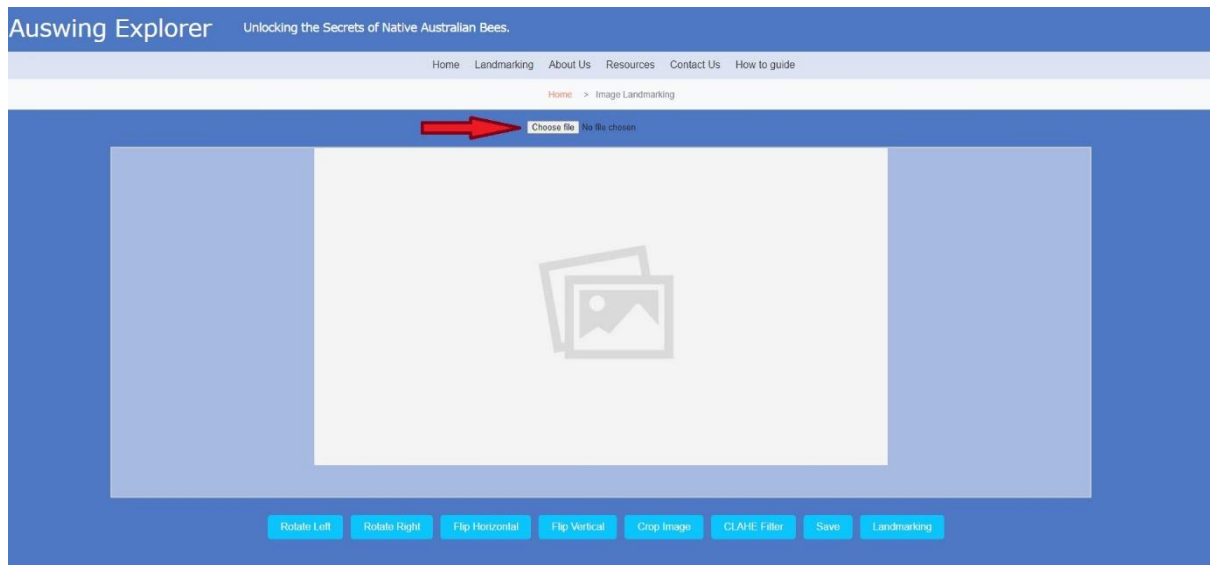
Username:

Password:



Step 3

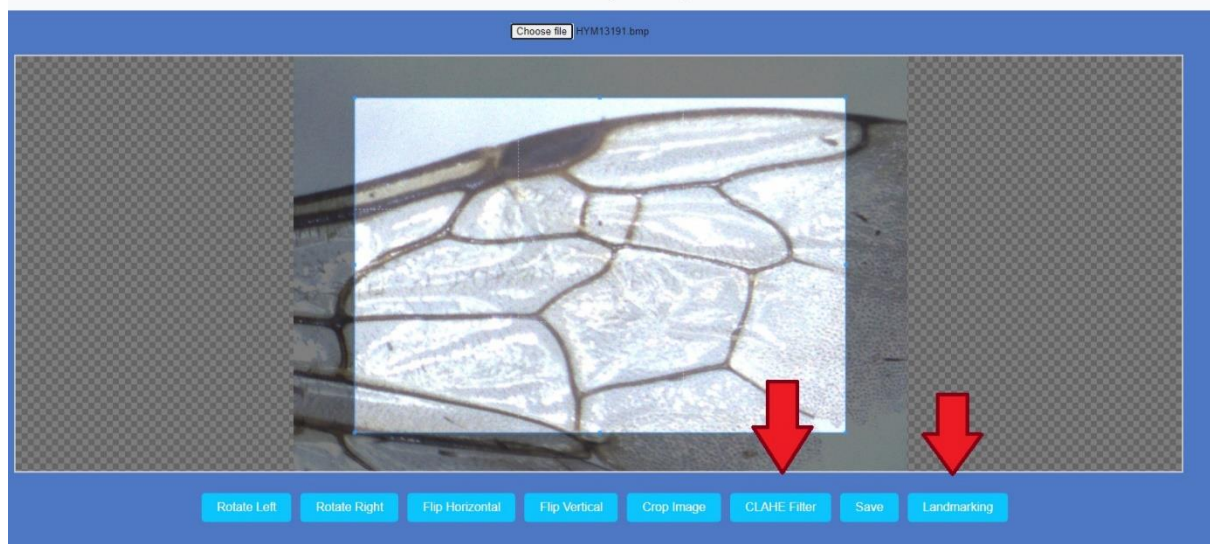
Click the landmarking button and you will be taken to the landmarking page.



It should be very similar to the above image, you may find some buttons at the bottom are missing, this is completely fine. Click Choose file and a pop-up window will open where you can navigate to your chosen folder.

IMPORTANT – Please choose them in order as they appear in the folder.

Once you have selected an image you should see a page similar to this



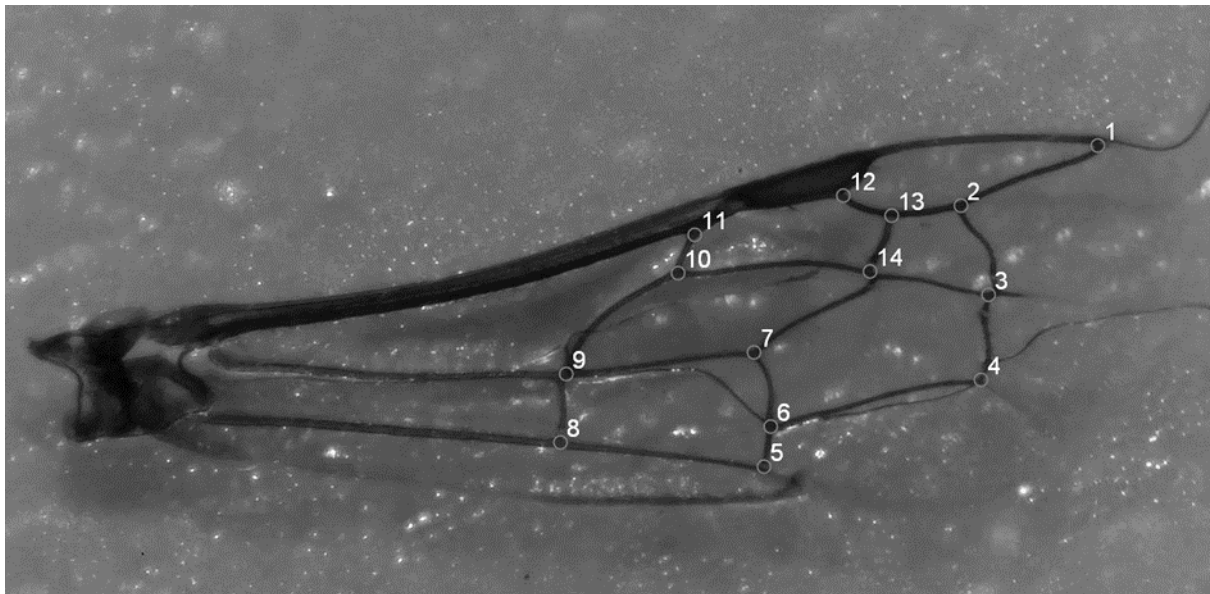
Again, you may have some buttons at the bottom missing, this is fine. Please do not crop rotate etc if those buttons are visible. Only use the Clahe filter to make the wing venation stand out more. Once you are happy with the image result, please click the Landmarking button.

Step 4

This part is the most important. You will need to place 14 landmarks on the wing image. Most of the landmarking locations are very similar between all images however some locations do move around slightly.

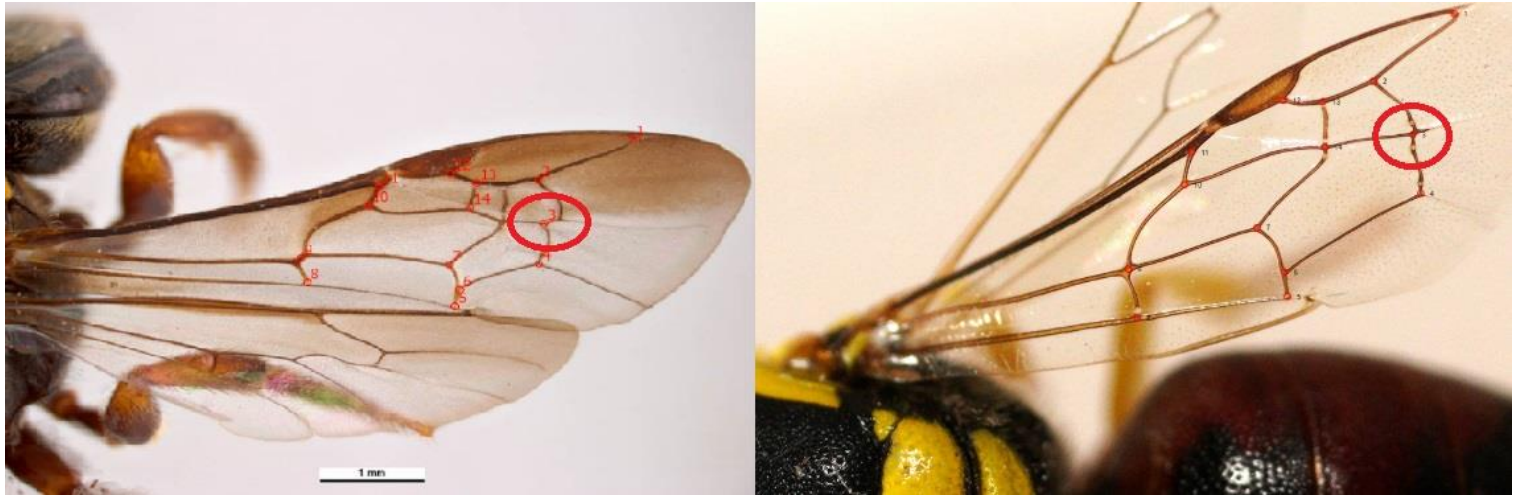
We have included a visual guide below that represents the most common variations of wing venations across many subgenera. Here is the most generic wing image with the 14 landmarks.

You can always undo your landmarks in order by pressing the undo button.

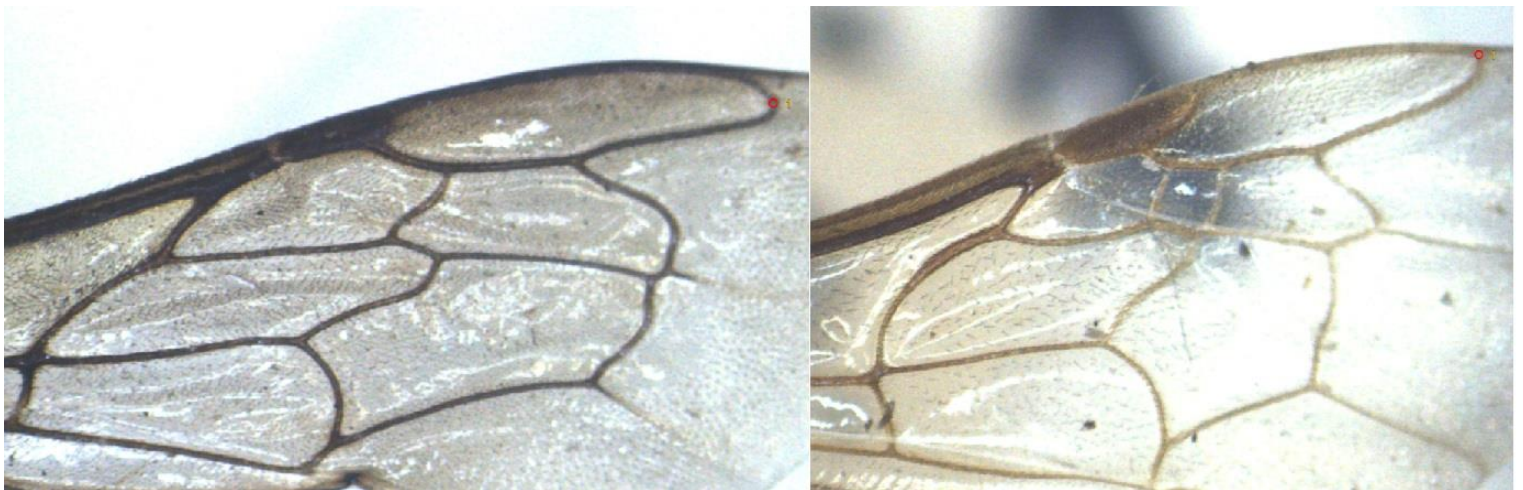


Remember to always do the landmarking in the order outlined above. It is important to get the landmarks in the correct order otherwise the prediction output will not work. If you want to view more images of different venations, please click on the **How to Guide** on the website.

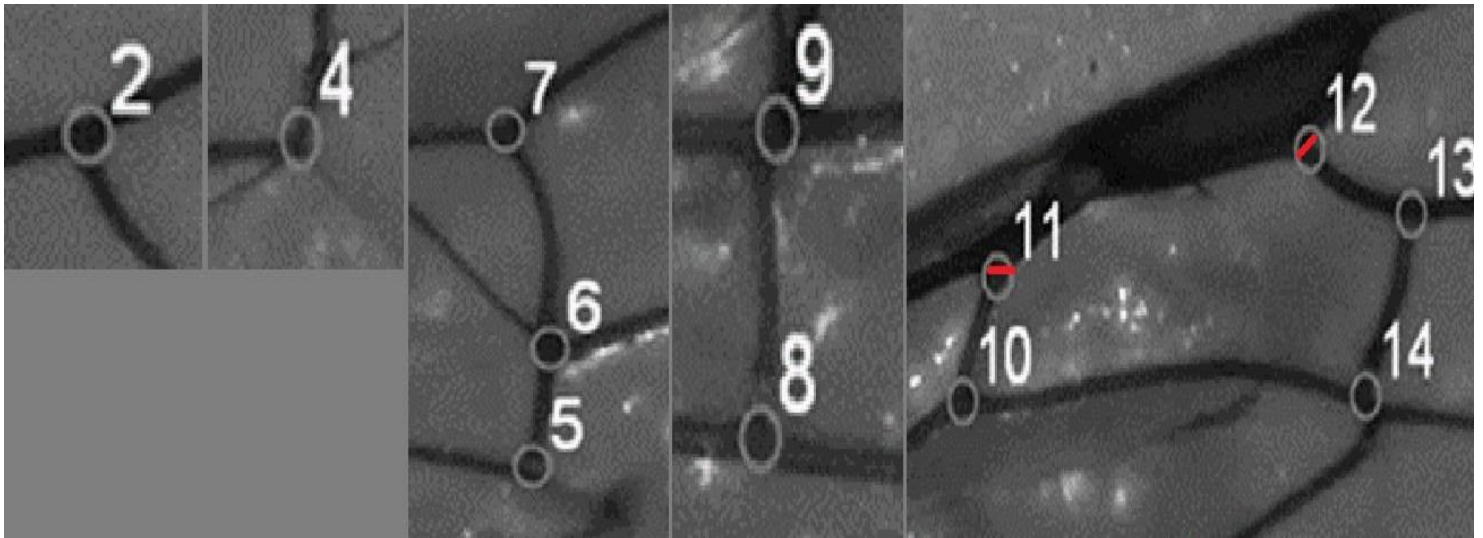
The location that has the most variation is landmark 3. If there are two possible places to landmark, please choose the location that is further inwards. Here is an example.



You may also find that Landmark 1 might be a bit ambiguous however, its easy to just remember it goes to the widest point, i like the image on the left or where the widest point is touching the top of the wing like the image on the right.



Here we will add a closeup of each landmark location.



You will notice that each landmark is placed where the venation lines meet. Such as 2, 4, 5, 7, 8, 10, 13, 14.

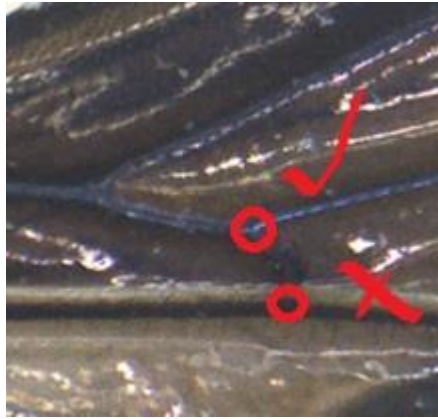
Where there is a larger section such as 9 the landmark is placed in the center of the intersection. For 11 and 12 image there is a line (red) at shows where the two lines meet up. Place your landmark as close to the center of the two lines as possible.

Sometimes landmark 8 might be missing towards the bottom where it joins. Just place the landmark again where the two lines would meet. There are instances where the lines are shorter. For instance,



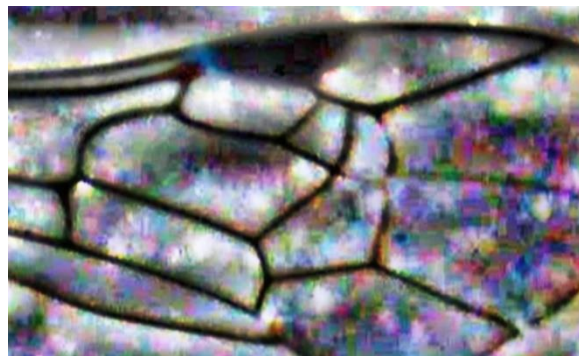
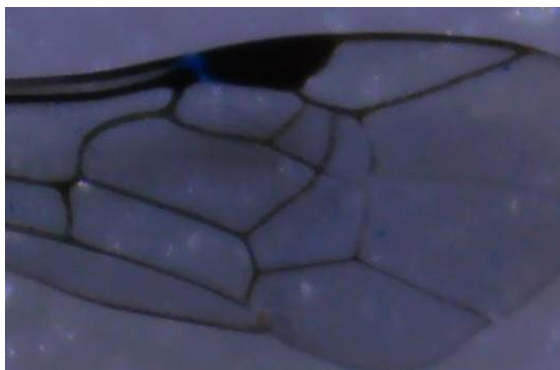
Place the landmark where it would normally be if you imagined a line between the bottom venation and the bottom of the broken one.

There are also instances where the 8 landmark maybe in a slightly different location, such as



This happens in some samples so place it as shown above.

Finally, there are also instances where the venation is difficult to see. Use the CLAHE filter button, press as many times as needed.



Step 5a

Once you are happy with your landmarking, please click the Start Identification button at the bottom.

It may take between 5 to 25 seconds for the result to come back once it does you will see a page like this below

[Home](#) [About Us](#) [Resources](#) [Contact Us](#) [How to guide](#)

[Home](#) > [Image Landmarking](#) > "Wing Sample ID Result"



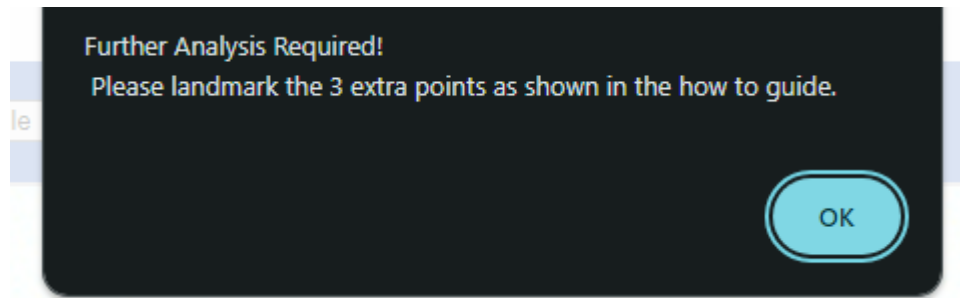
Your Sample Results:

Family: Halictidae
Genus: Nomia
Subgenus: (Reepenina)
► ***Species:

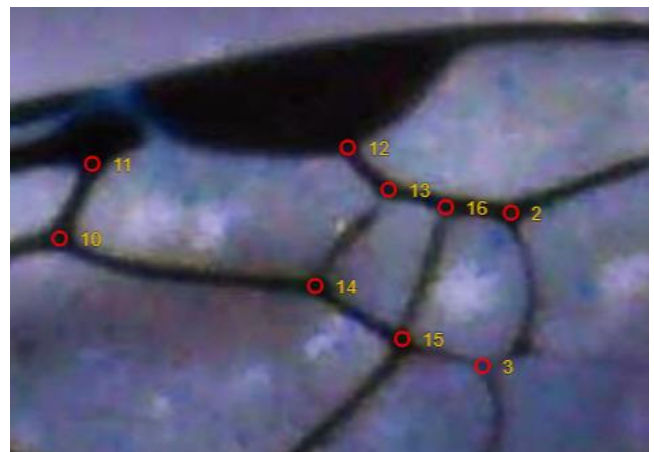
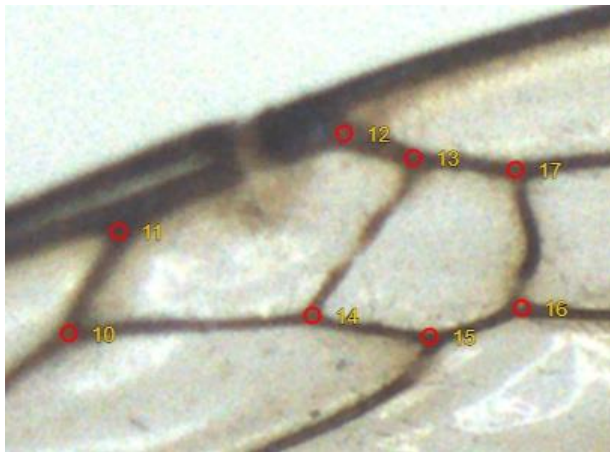
Important Notes:
If the genus and subgenus return with the same value, the subgenus value is only a placeholder for the program.
If a level does not produce a result, it could mean that the specimen is unplaced or that particular specimen is not in the database currently.
The accuracy of predictions may vary depending on the quality and completeness of the input data. Ensure that the provided data is as accurate and detailed as possible to improve prediction reliability.

After you see this screen there is nothing left to do for that image as everything will be recorded automatically within the website itself. So now you can click the Image Landmarking in orange there which will take you back to the upload an image page where you can move onto the next image for landmarking.

Step 5b If however, you receive this notification on the webpage after you clicked start Start Identification



Then you need to follow the prompt text which will say please add **3** more landmark which will be 15, 16 and 17 **OR** add **2** more landmarks 15 and 16. Here are the sample images below



Once you have landmarked those positions then click **continue prediction**. You should then see the output like earlier.

Step 6 and once again you do not have to do anything further except move onto the next image if applicable.

After you have finished all the images, please accept a HUGE thank you from us. We really appreciate the time you have taken to help us.