5. In the workflow, Click **Detect and Track** to

open the **Detection and Tracking** panel.

In the tracking window, click the three worms indicated by the red arrows to select them. WormLab overlays the selected worms in green.

WormLab® Tutorial

Tutorial: Tracking worms

In this tutorial, we will use the sample video FiveWorms.avi to learn the basic steps for tracking and analyzing crawling worms.

- 1. Start WormLab.
- 2. Open the FiveWorms.avi video.
 - a. Click Help>Tutorials.
 - b. In the *Tutorials* folder, open the *Video* folder.
 - c. Drag the *FiveWorms.avi* file into the WormLab main window (area with the MBF logo).
- 3. In the workflow, click **Set Sequence Info**.
 - a. Set the **Captured framerate** to 15fps.
 - b. Set the **Scaling** to 24 μ m/pixel.
 - c. Click **Save**.
- 4. Click **Adjust Image**.
 - a. Set the **Threshold Level** to 130.
 - b. Click Apply.



Creation time: Fri Sep 23 12:48:32 2011
Captured frame rate 15.00 🗧 fps
Scaling
Scale: 24.00 🚔 µm/pixel
Measure 1000 🖨 µm is 41 pixels





WormLab® Tutorial

Tutorial: Tracking worms

- 6. Select the **Detection** tab.
 - a. Click the Advanced heading and uncheck the Width Fitting checkbox.
 - b. Click the **Worm Shape** heading and set the **Fitting iterations** to 80.

ection and Tracking						đ
_						?
Detection Track	ing	Repair				
Detect worms						
Delete worms	This	frame 🔘 All	frame	s		
Detection Paramete	ers					
Detect worms	at the	edge of the ir	mage			
Area	Min:	20.00		Max:	10000.00	
Length	Min:	50.00		Max:	10000.00	
Width	Min	0.00	-	Max	10000.00	-
Width/length ratio	Min:	0.05	-	Max:	0.25	
Detection Fit	Min	0.75	-			
Registration Fit	Min	0.25	*			
 Advanced 						
Detection frequence	y	10 🌲 frames	5			
Length fitting						
Width fitting						
Use Whole Plate M	ode [
▼ Worm Shape		_				
Fitting iterations	80					
Spinal axis sample	59					
Enforce width	unifor	mity				

- 7. Click the **Tracking** tab. Crawling (under **Tracking Mode**) should be selected.
 - a. Click the **Advanced** heading and set **Frames worms can overlap** to 100.
 - b. Click the **Start** button (at the top of the panel) to begin tracking.

Note: WormLab tracks the five worms, performing forward and backward tracking and ending back at frame #1.



WormLab® Tutorial

Tutorial: Tracking worms

- 8. In the workflow, click **Analyze Data** to display the **Data Analysis and Plotting** window.
 - a. Click the name of an analysis under
 Position & Speed or Body Shape on the left.
 - b. Click the **Export** button to export the data table.

If MS Excel is installed: Data is automatically loaded into Excel.

If you don't have MS Excel: You're prompted to select a program to open the exported .CSV file.



9. In the workflow, click **Save Project**, enter a file name, then click **Save**.

Questions or Problems?

Contact MBF Customer Support: (802) 288 9290 or support@mbfbioscience.com