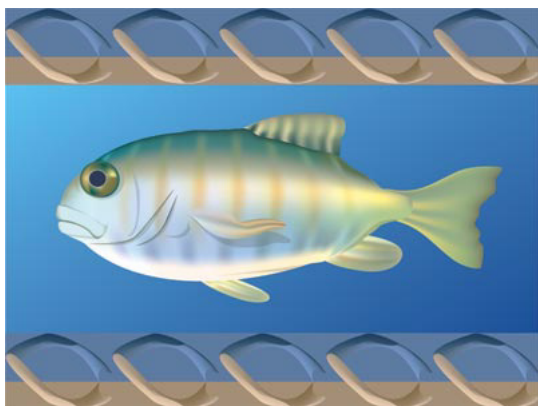


Adobe Illustrator CS

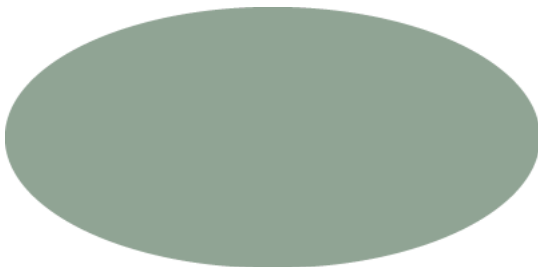
# Mastering mesh

With a background in painting, sculpture and 3D imaging, Ivan Torres knew that the Gradient-mesh tool in Adobe® Illustrator® would allow him to paint in a powerfully unique way. In creating this fish illustration, he demonstrates how, unlike any other medium, the mesh allows him to move a stroke of color without changing the relationship between colors.



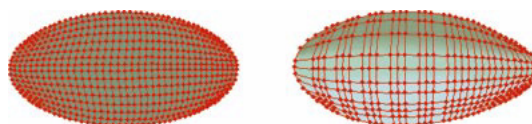
## 1. Creating the fish's body.

Create a solid-filled oval; while it's selected, choose Object > Create Gradient Mesh. Set fairly high numbers for rows and columns; for his fish (shown above at about 30% actual size) Torres set 17 rows, 35 columns. Set Flat for Appearance, 100% Highlight and click OK.



The original oval

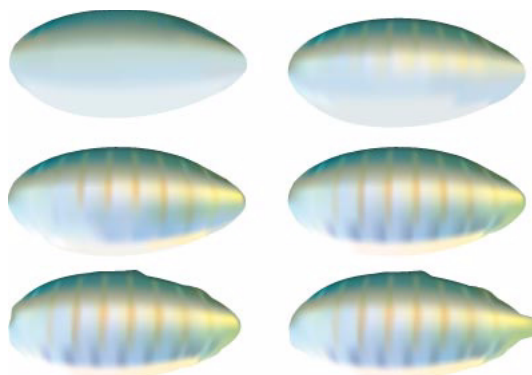
Next, to make the base for the fish's stripes, you'll need to create an irregular pattern within the mesh. With the Direct Selection tool, select anchor points and delete—the connected rows and columns will be deleted along with the points. Torres deleted 8 columns and 10 rows.



The mesh created; after selecting points and deleting to create a pattern in the mesh

**Tip:** Marquee horizontal anchor points with the Direct-selection tool. For even more selection control, try working in Outline mode, disable Use Area Select in Preferences > General, or select points using the Lasso tool.

With horizontal rows of points selected (make sure you are now in Preview mode), mix or choose new colors in the Colors palette (use View > Hide/Show Edges to hide/show selection edges). Torres horizontally selected sections of the mesh, changing colors to create a sense of volume.

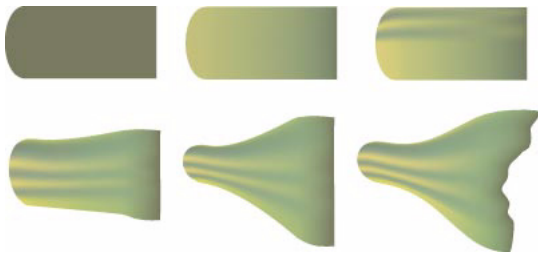


Recoloring selected rows and columns using the Color palette and the Adjust Colors filter

**Tip:** For more subtle color transitions, select an area and choose Filter > Colors > Adjust Colors to adjust the color cast of your selection. Carefully Direct-select points and reposition them to form the fish body.

## 2. Making the fish's tail and fins.

Create several colored rectangles and ovals. Again, convert each object to a gradient mesh, but assign a low value for columns. Direct-select sections of each object and use the Adjust Color Filter to create gradual changes in tone (use C-Option-E (Mac)/Ctrl-Alt-E (Win) to reopen the last-used filter). Direct-select points on the objects and adjust them to form tail and fin shapes. Move each object into a separate layer for easy editing.



Creating the fish's tail

## 3. Creating the fish's eye and lips.

Create three circles: one small, one medium and one large. Convert the medium-size circle to a gradient mesh this time by clicking on the circle with the Gradient-mesh tool. Add additional rows or columns by clicking again with the tool; delete by Direct-selecting points, rows or columns and deleting. Torres ended up with unevenly spaced rows and columns (five of each), which he colored to achieve a wet, reflective-looking surface. When you are pleased with the glossy part of the eye, combine all the circles and adjust the outlines of some to be less perfect.

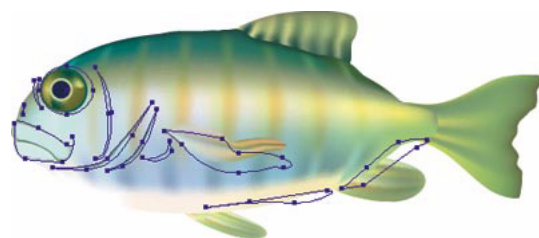


Creating the fish's eye and mouth

To create the fish's mouth, begin with a rectangle on a layer above the fish. Convert the rectangle to a gradient mesh using Object > Create Gradient Mesh, and enter different low values for rows and columns, maintaining Flat for Appearance. Select areas of the object and use the Eyedropper to load colors from the fish to create smooth color transitions between the mouth and the body. Move this object into position and reshape it to form a mouth.

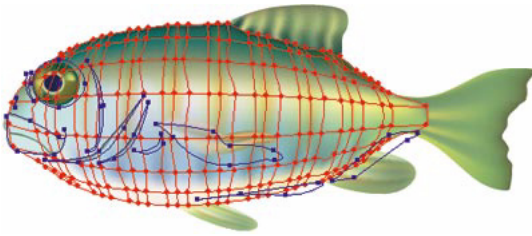
## 4. Creating shadows for the fish.

Duplicate the layer containing the fish's body by dragging that layer to the New Layer icon in the Layers palette. On a layer above this one, use the Pen tool to draw a contour defining each shadow as a closed object. Select all the shadow objects and choose Object > Compound Path > Make to unite them into one compound object.



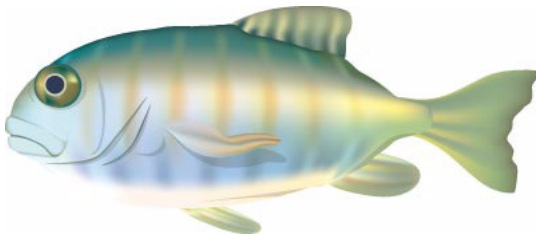
Top, drawing objects for shadow areas; bottom, making them into a compound path

Use these shadow objects as a mask for the copy of the fish body. Select both the compound path and the copy of the fish body (in the Layers palette, Option-Shift-click/Alt-Shift-click the shadow and fish copy layers to select all objects on those layers) and choose Object > Clipping Mask > Make.



*Masking a copy of the fish with the compound path*

To simulate shadow colors, select the masked copy of the fish and use the Adjust Colors filter to darken the area and reduce the contrast. Torres created a shadow that contrasted the cyan color cast of the fish by decreasing cyan and increasing yellow and magenta—each in increments of 2 to 5%. After applying the filter, with selection edges hidden C-H (Mac)/Ctrl-H (Win), he reapplied the filter using C-E (Mac)/Ctrl-E (Win), until he was satisfied.



*The final fish shown with completed shadows*



*After reshaping is complete, a copy is created, reflected and sheared, and colors are inverted*

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## 5. Creating the border “bone” shape.

Create an oval; while it’s selected, choose Object > Create Gradient Mesh, assigning 1 for rows and columns and “Flat”. Using the Delete Anchor Point tool, delete the four original points of the oval, leaving only the mesh points. Reposition the remaining points to create an arcing effect, and assign colors to each point. Next, use the Reflect tool to flip a copy of this object horizontally. With the copy selected, choose Filter > Colors > Invert Colors. Lastly, use the Shear tool to adjust the copied image to touch the original border object.

