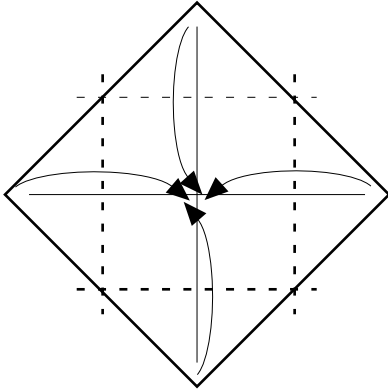
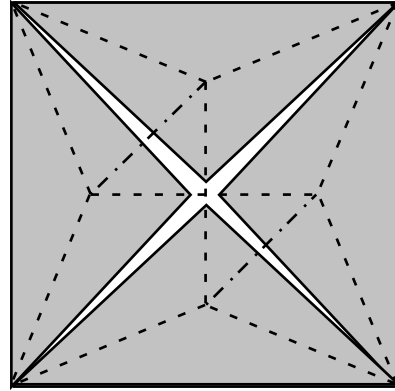


Ornithopter

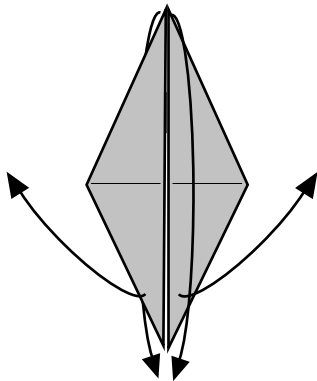
Eileen Tan
etan@physics.cornell.edu
17 February 2003



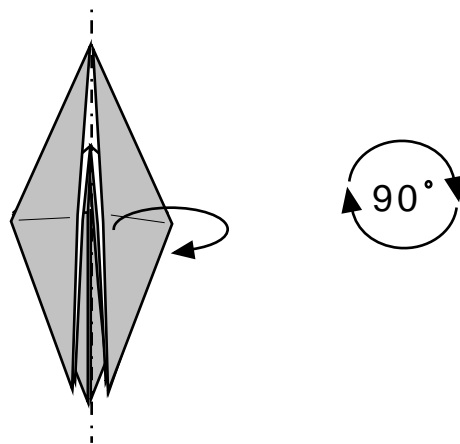
1. Blintz.



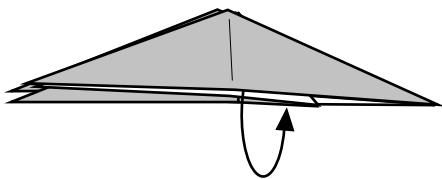
2. Fold a bird base.



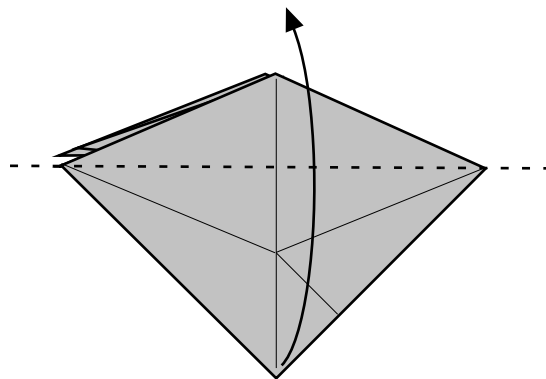
3. Stretch out the sides.



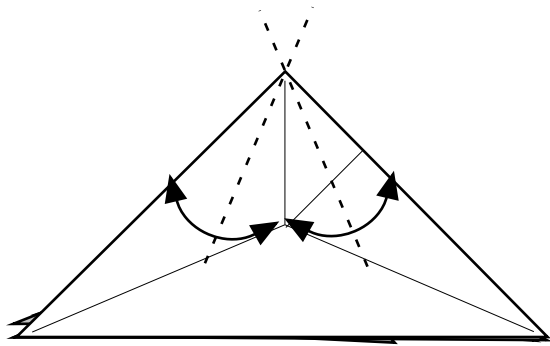
4. Mountain fold in half, then rotate the model by 90 degrees.



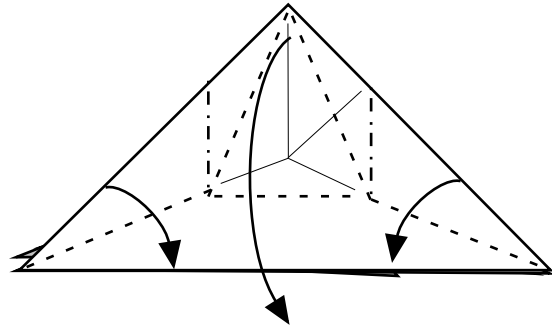
5. Pull out paper.



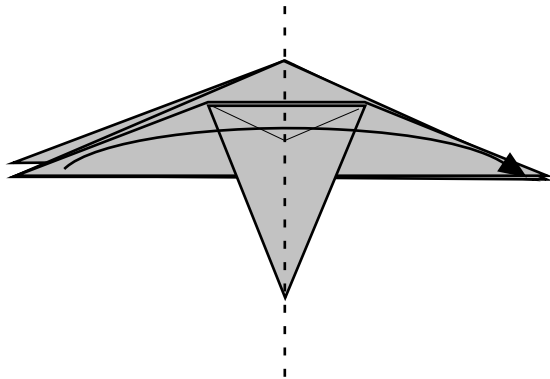
6. Valley fold.



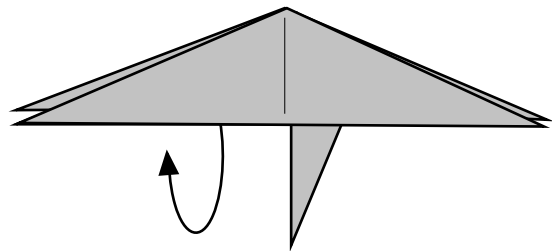
7. Fold and unfold along the angle bisectors.



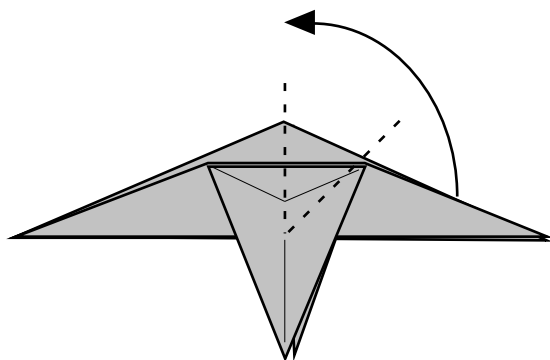
8. Fold the flap down on the existing angle bisector creases.



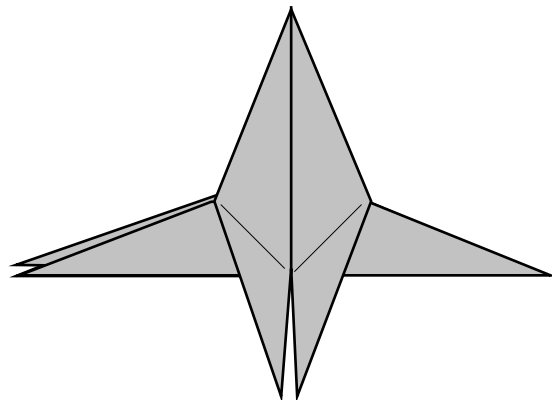
9. Valley fold one flap to the right.



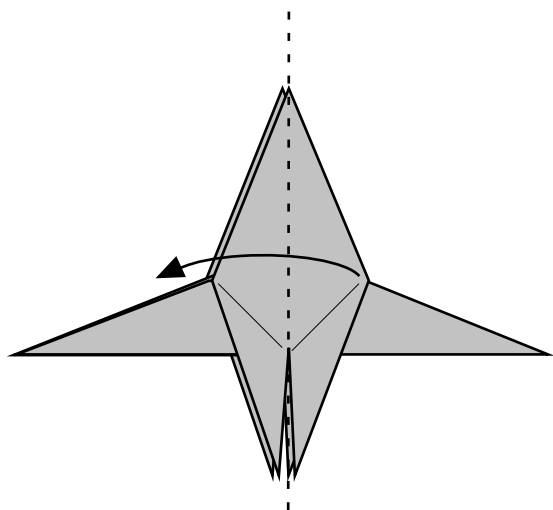
10. Pull out paper..



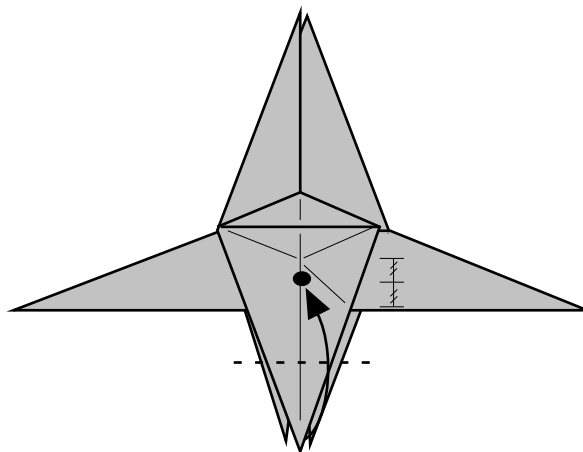
11. Squash fold the right flap.



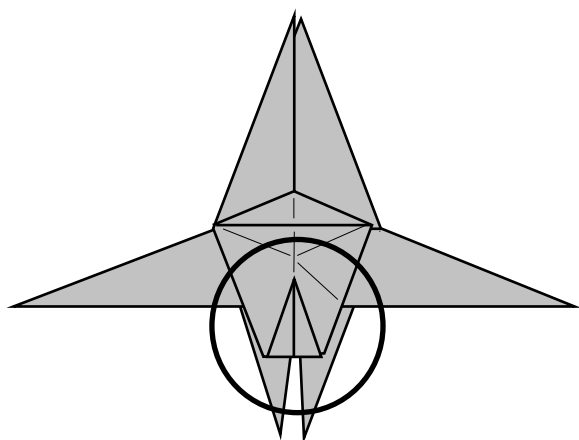
12. Repeat steps 5-11 behind.



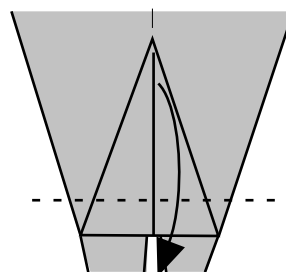
13. Fold one layer to the left.



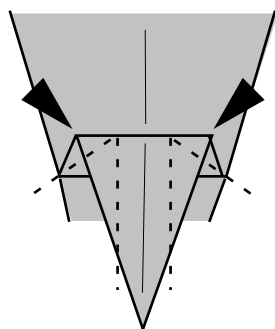
14. Valley fold.



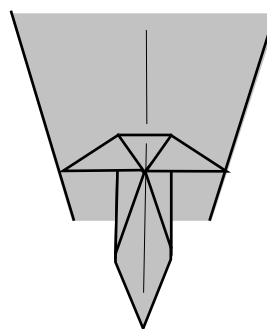
15. Cannon details.



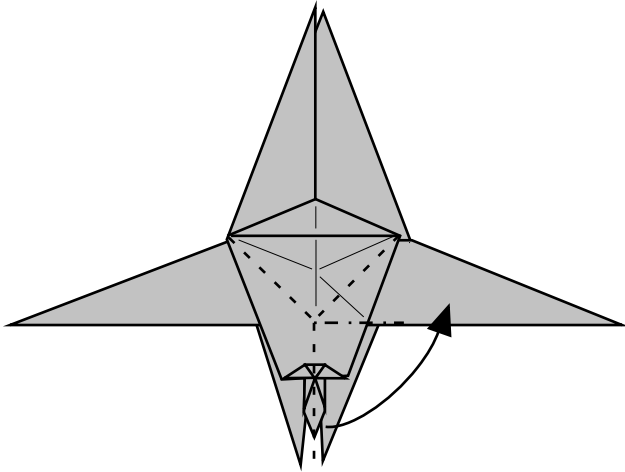
16. Valley fold.



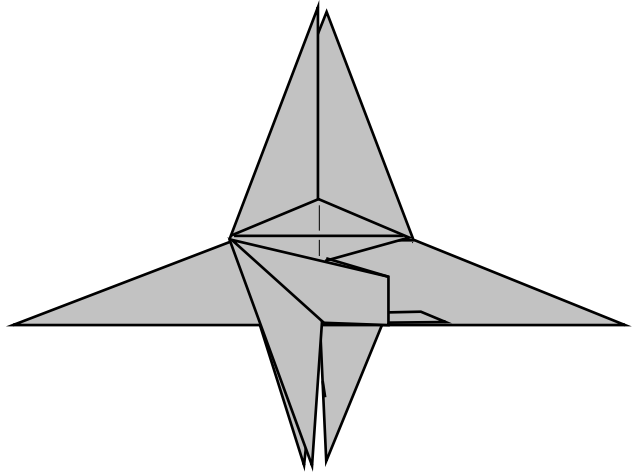
17. Narrow the tip and squash fold the corners.



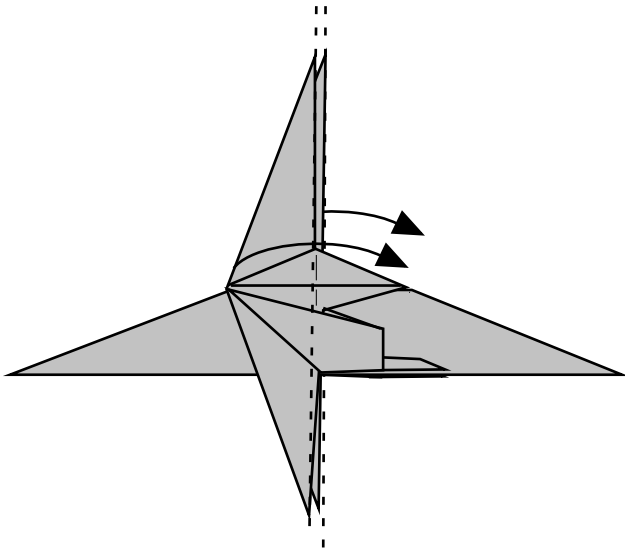
18. Finished cannon.



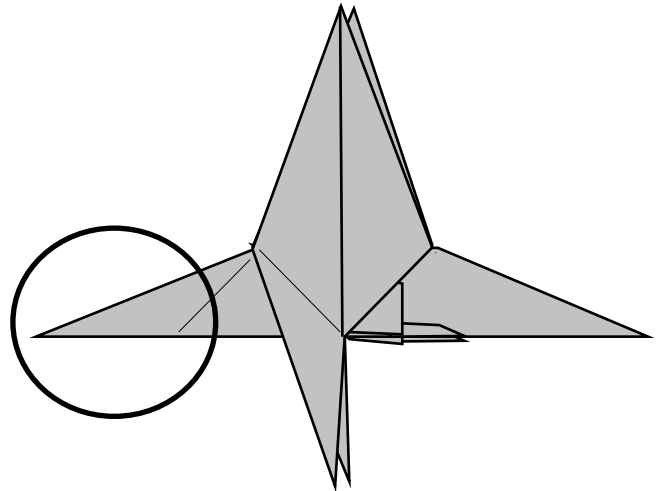
19. Rabbit ear.



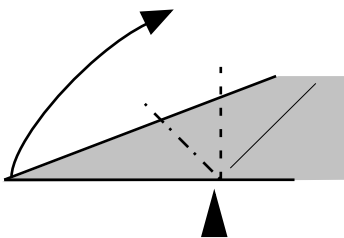
20. Repeat steps 13-18 on the flap behind.



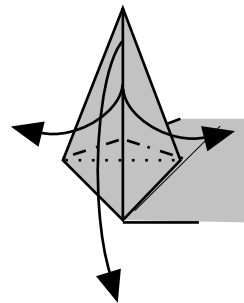
21. Fold one layer to the right.
Repeat behind.



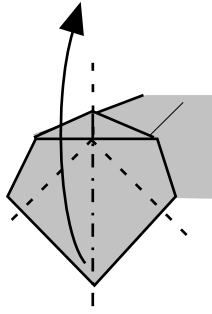
22. Tail details.



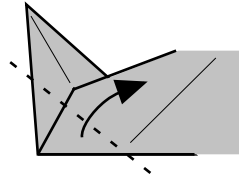
23. Squash fold.



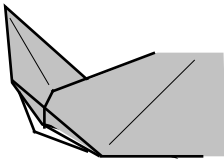
24. Open out sides
while folding tip downwards.



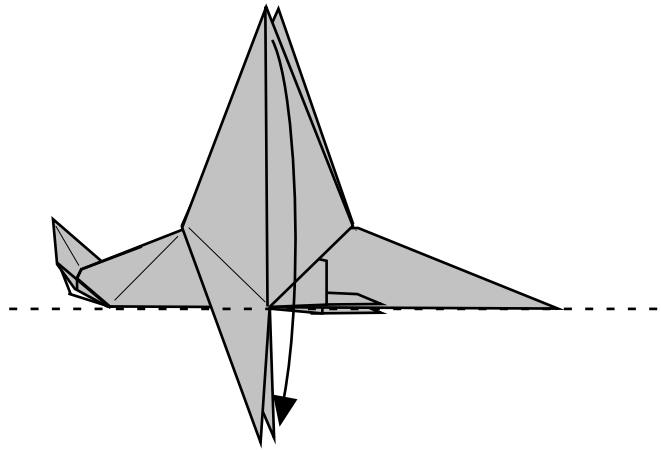
25. Reverse fold the tip upwards.



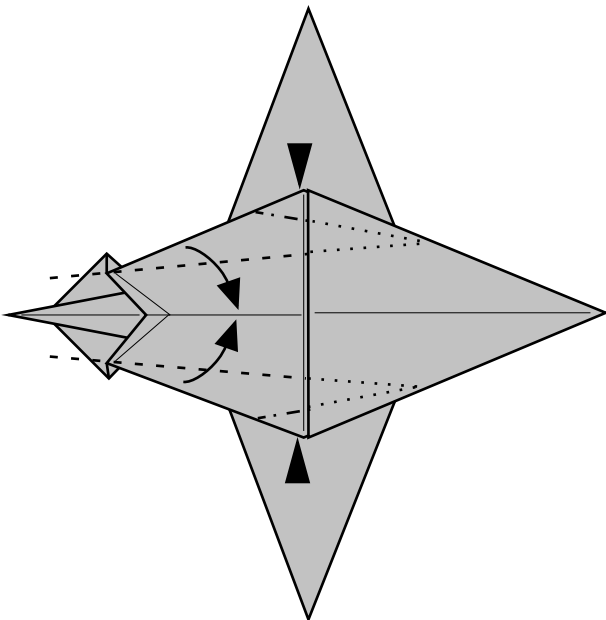
26. Valley fold to the side.
Repeat behind.



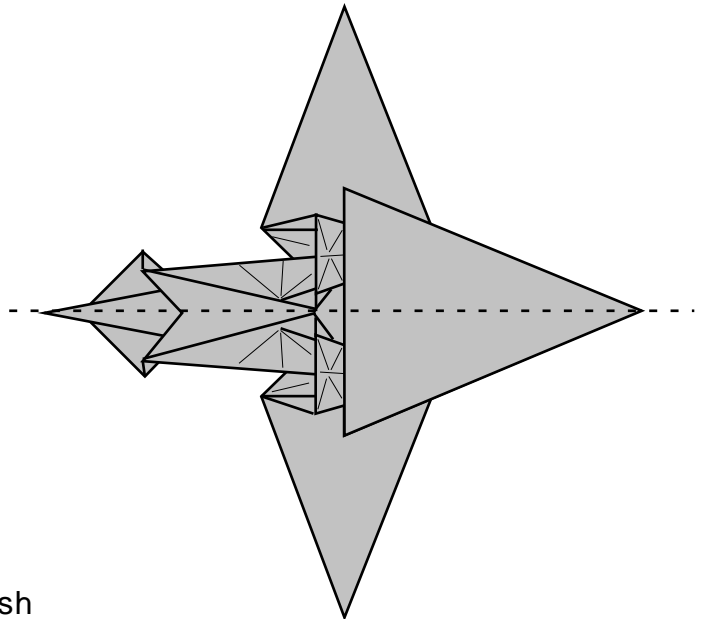
27. Finished tail.



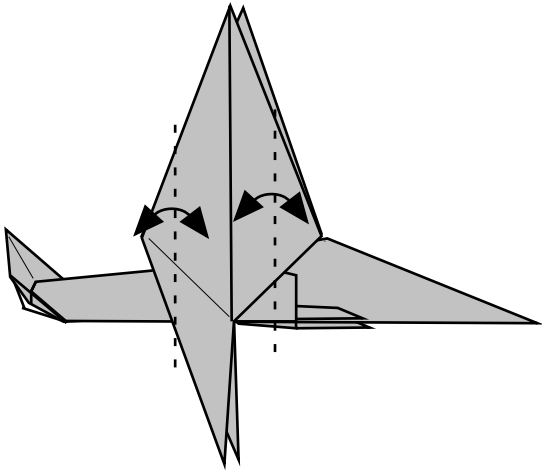
28. Open up the model. The legs can be temporarily valley folded out of the way.



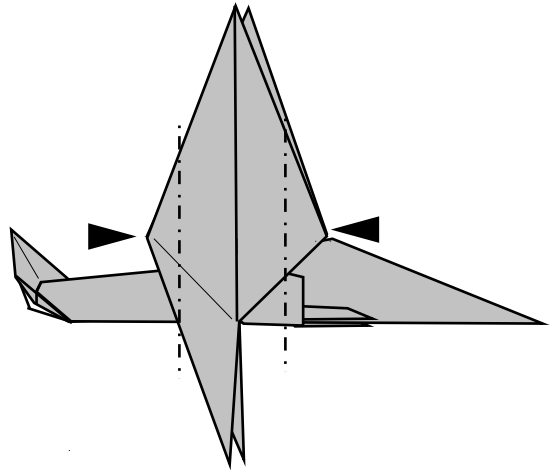
29. Narrow the tail and spread squash the sides. This won't be a clean spread, but make it as neat as possible.



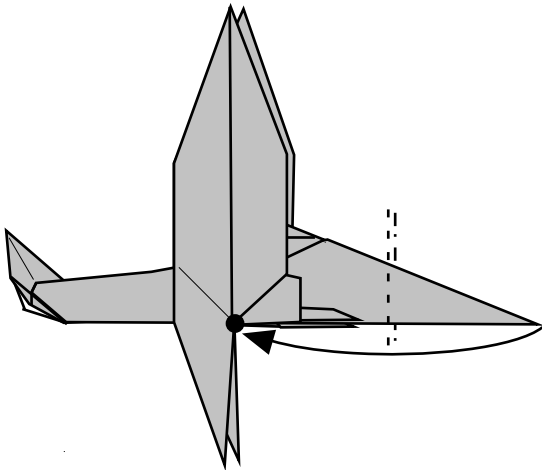
30. Fold the model back in half.



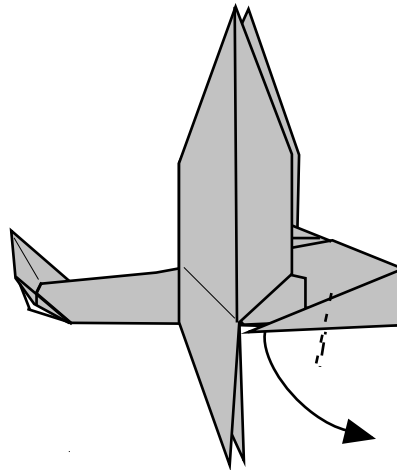
31. Fold and unfold the wing.
Repeat behind.



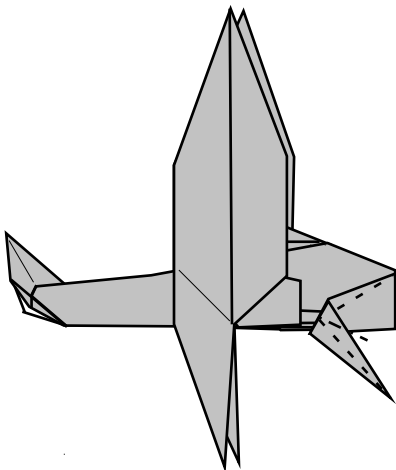
32. Close sinks. Repeat
behind.



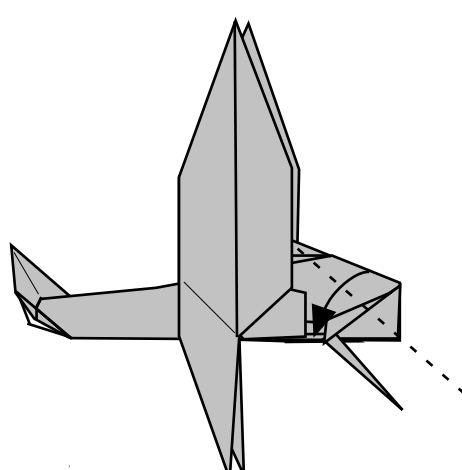
33. Outside reverse fold.



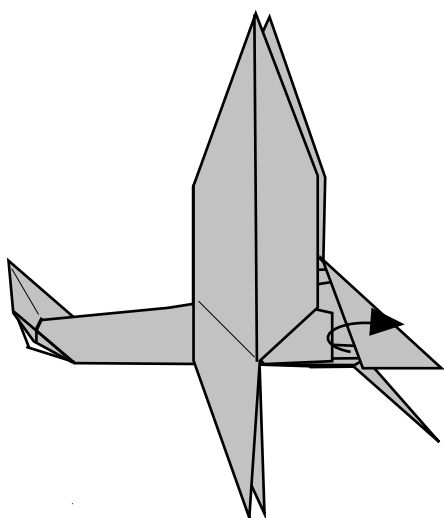
34. Outside reverse fold.



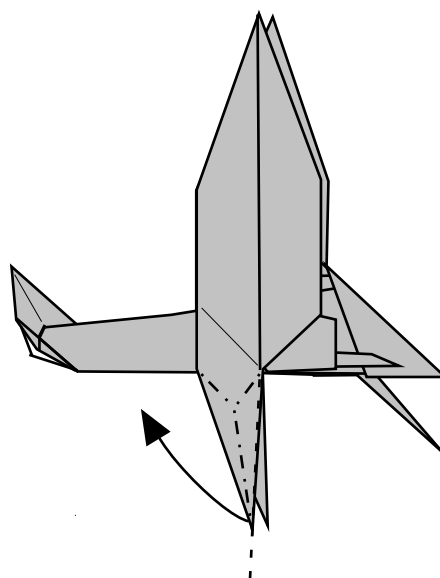
35. Narrow the leg. Repeat behind.



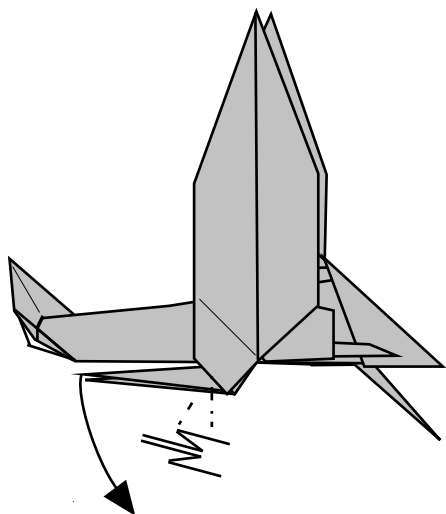
36. Valley fold. Repeat behind.



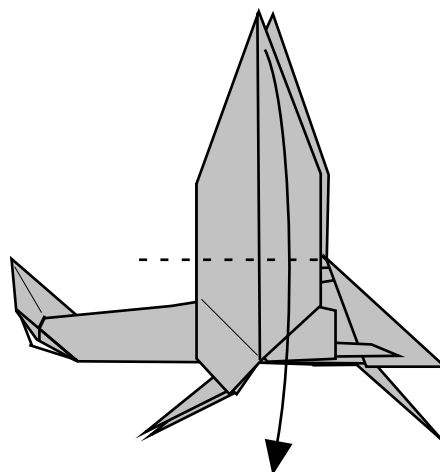
37. Pull out cannon.
Repeat behind.



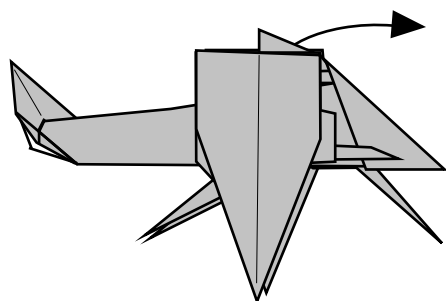
38. Double rabbit ear the leg.
Repeat behind.



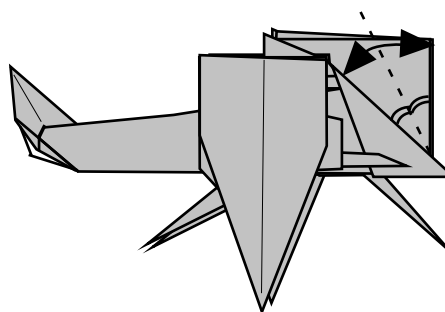
39. Crimp the leg.
Repeat behind.



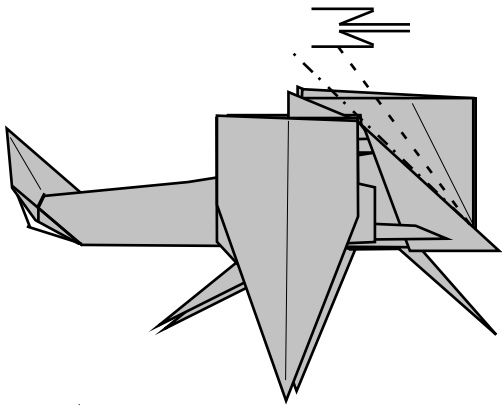
40. Fold the wing down.
Repeat behind.



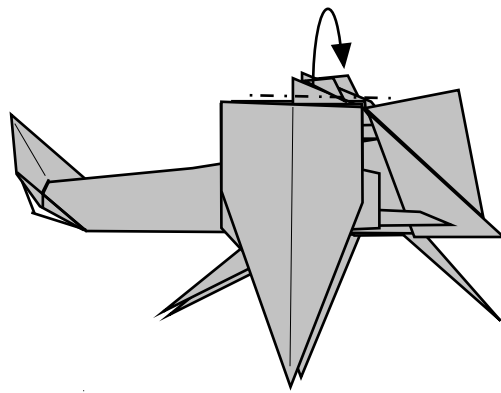
41. Pull out the flap of paper
in the model.



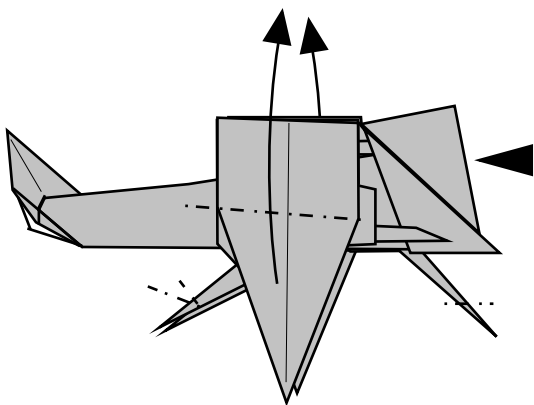
42. Fold and unfold along
the angle bisectors.



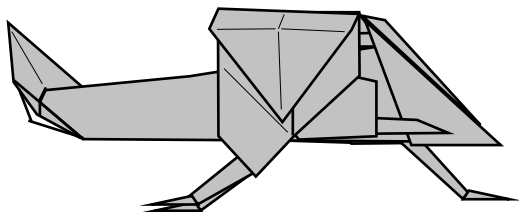
43. Crimp.



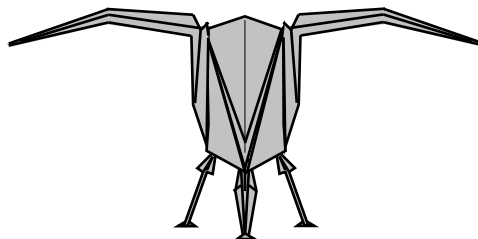
44. Mountain fold the tiny flap into the model. Repeat behind.



45. Final detailing:
1. Reverse fold the front leg.
 2. Crimp the rear legs.
 3. Bend the wings so that they are at right angles to the body.
 4. Mountain fold the wings slightly
 5. Open the model slightly and push in the cockpit.



side view



front view

Finished ornithopter.