

# ANUBIS



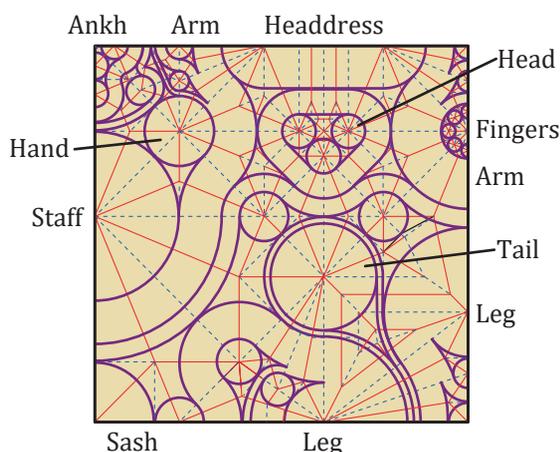
First time:  70cm/28"

Paper preferences:

- Duo
- Thin
- Shapeable

Recommended papers:

- Double tissue

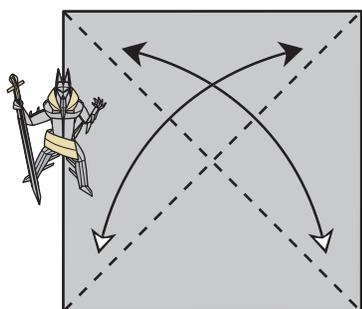


Anubis is the jackal-headed Egyptian god with the job of guiding the dead to the afterlife. He weighs the heart to determine whether a soul is allowed to enter the underworld or is consumed and gone forever.

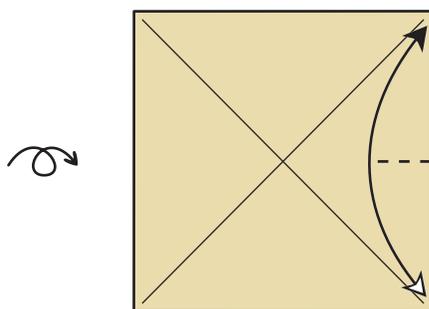
The folding sequence is very long, so I didn't include instructions for making individual fingers on the hand holding the staff, but you can point-split that flap if you like. On the other hand (pun intended), there's a spare corner which can be pulled out and shaped to make a heart.

There are many challenging sinks towards the end of the model. In almost all cases, the precreases and sinks are close together for the sake of clarity, but you may get a neater result by changing the order of the steps so that you precrease several sinks before actually sinking any of them, so that there aren't as many layers while precreasing.

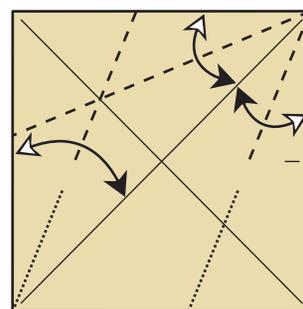
**Start skin colour side up.**



1. Fold and unfold the diagonals, then turn the paper over.

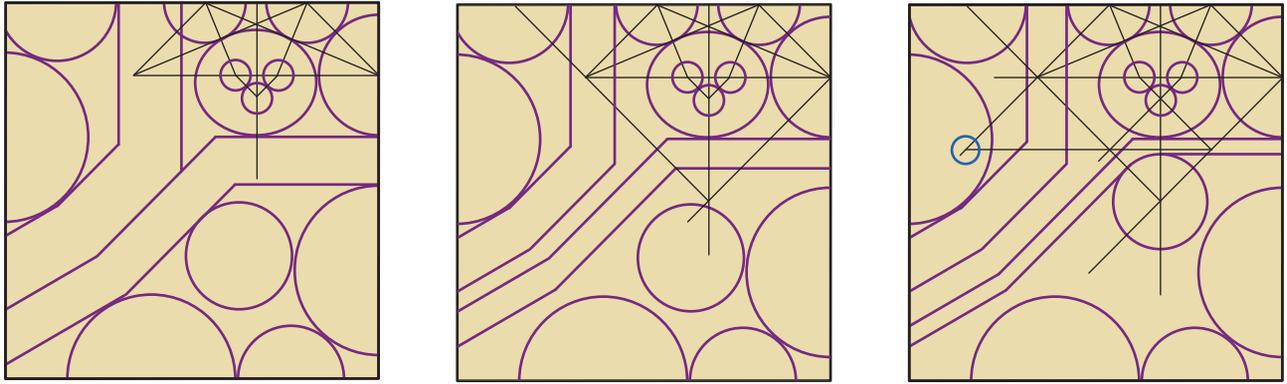


2. Make a small valley fold halfway up the right raw edge, then unfold.



3. Fold and unfold three angle bisectors, only marking firmly in the top half of the square.

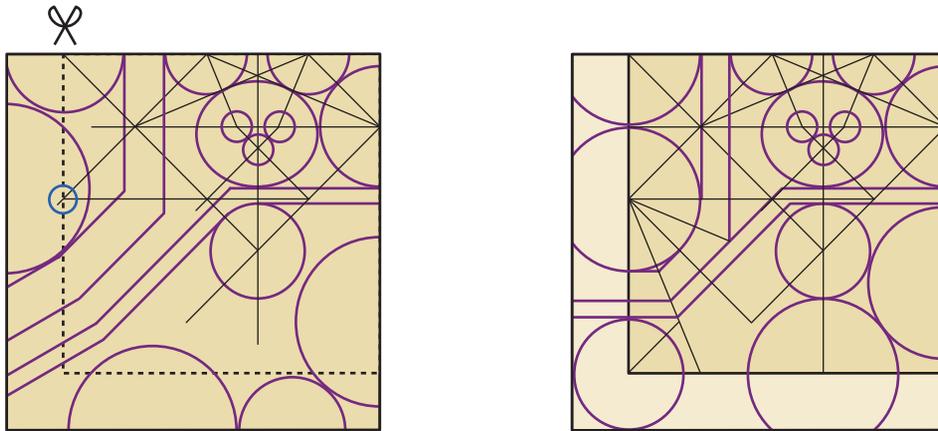




Left: Previous arrangement. Centre: Spotting coincidental alignments. Notice that reducing the width of the rivers makes much more room to push flaps closer together.  
Right: The flaps have moved into position.

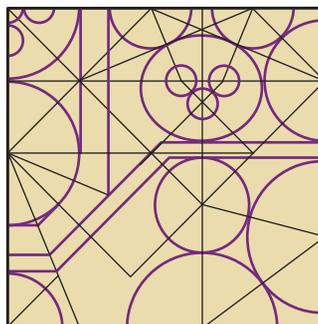
From the arrangements above, we see that reducing the size of the rivers has made an enormous saving! Be careful not to mistake this for an efficiency saving though; we've made the rivers shorter, which means we're really using a different tree (and hence can't make a meaningful efficiency comparison).

The circled point above is itching to be used, and we get an idea here: can we cut off a border along the left edge? Functionally, this is a bit like the opposite of a graft, so we might think of this as an **antigraft**. We need to make sure we still have enough paper to fit the flaps at the bottom of the paper, but it's worth a try.



Left: Cutting off part of the square using a vertical alignment at the circled point.  
Right: We have to reduce the size of the staff and leg flaps but, with some rearrangement, this smaller square works well.

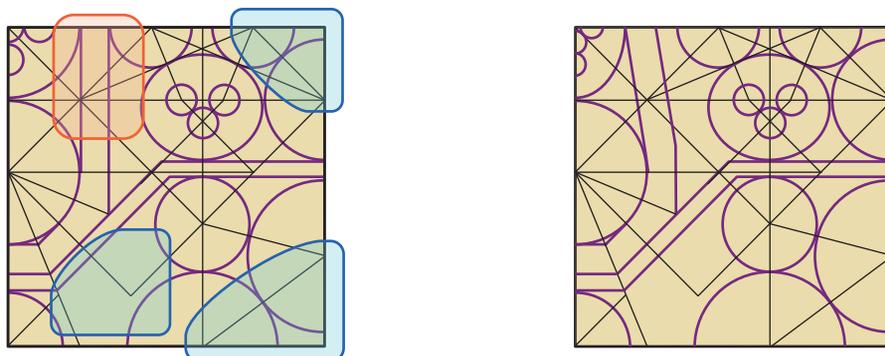
We get very lucky here; there seems to be exactly the right amount of space for the garment flap in the bottom-left raw corner, and look how snugly the right leg flap nestles between the surrounding flaps in the right image above. We'll take this good fortune, and we can now stop seeking alignments because every flap is in position. Let's draw in some remaining axial creases (between the centres of touching flaps) and split the Ankh flap up into three subflaps before moving on.



Adding the Ankh subflaps and some axial creases.

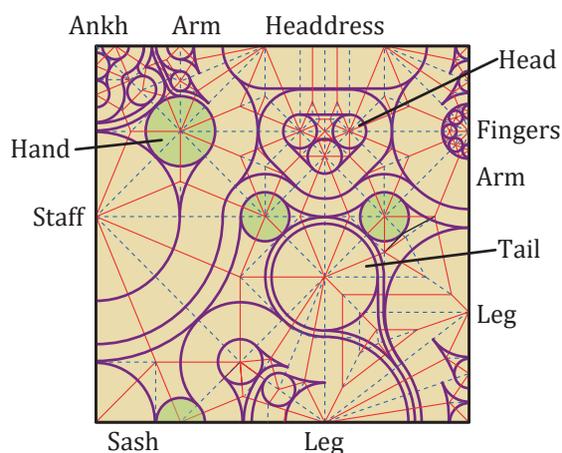
## Filling in the gaps

We might notice that there are three regions of unused paper, each of which happens to be near one of the four limbs. If we could move some flaps around for a final time, maybe we could get enough paper near all four limbs to add some extra details, such as some spikes.



Left: We have excess paper in the light blue regions. We'd like some extra paper in the orange region too. Right: The Ankh subflaps have moved slightly to make some horizontal room.

Before adding the spikes though, there are still some empty regions which we should fill in at the same time, to break up large molecules into smaller ones. Given we have the rest of the arrangement, these filler flaps are most easily found by folding the existing arrangement, and are shown in green below. At the same time, we can find paper for other small details, like fingers and another point in the centre of the headdress to end up on Anubis's forehead. We obtain the final crease pattern below.



Anubis's crease Pattern. (Note that there isn't an axial crease between the tail and leg flaps; by drawing the crease pattern precisely, we often find small adjustments like this need to be made.)

## The end

Anubis's design contains many design elements and considerations that we've seen in this series, such as colour changes, point splitting, aspects of grafting, asymmetry, and  $22.5^\circ$  references. Plus, it has a ridiculous number of steps. Therefore, it seems a fitting final model to end this trilogy and I hope that you find it to be a suitable challenge.

As a closing thought, let's remember our question about symmetry from the beginning of this chapter: why does this design end up so asymmetric? In short, because we let it be so. By moving flaps one at a time, they each fell into the right place, as there was room. This allows for an efficient arrangement that we couldn't have obtained if we'd forced the flaps which are symmetric in the subject (like the legs) to be in symmetry pairs in the base.

So although we've explored many design methods in this series, let this model be a lesson that being free of rules and general principles can be the most effective tool in origami design. So for the final time, I encourage you to be creative and fold new origami stories of your own.