## Drigami From hard to simple



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## Intraductian

In the face of origami for the first time, you may think that it's a kind of magic and you will never be able to fold a model, let alone invent something yourself.

In fact, creating new models is not so difficult, while designing a simple and elegant model is much more difficult. The truth is that the more complex the model, the easier it is. The main thing is not to be afraid. And I will try to show you that.

In fact, the designs of models can be divided into two ways:

1) When you just start to fold a sheet of paper.
2) When you plan the model in advance.

I think you could easily determine in which style each model was invented.

Unfortunately, drawing diagrams is less pleasant than designing the models themselves. But if the model cannot be folded by anyone but you, then it is useless. I hope you will enjoy the time I spent drawing these diagrams.

As I drew the diagrams slowly for over a year, their style differs slightly.

I am very grateful to all who helped with the editing of models for this book, especially Arlo Sears-Bicknell.

Successes.
Pavel Nikul'shin


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Dinosaurs Park

Valley fold.


Valley-fold and unfold.


Unfold.


Unfold.


Pull out some paper (unfold, unsink).



Rotate the model on 180 degrees.
Rotate the model on 90 degrees.


Repeat steps 3-4.


Align to points.


## TECHNICS



Pleat fold.


Spread sink fold.


Open sink fold.


Close sink fold.


## Crease a $3 \times 3$ grid.


1.

3.


7.

## Crease a $5 \times 5$ grid.


1.

3.

6.

7.

## Crease a $7 \times 7$ grid.


1.

3.

6.

8.

## Crease a 9x9 grid.


2.
1.

4.
3.

6.

7.

9.

17

# From the series colors of the rainbow Red shell 

Paper: Monocolor
Side of square : 21 cm
Density of paper: $80 \mathrm{~g} / \mathrm{m}^{2}$
These are very simple models of shells. There have turned out to be 7, and I have tried to pick a colour for each one to form a rainbow.


Fold and unfold one layer.

Repeat steps 2-3 on the other sides.



Turn one layer on each side.



## View from above.

Fold in a circle.


Repeat a few times. To turn up corners.


Make crimp-fold.
Repeat on the other sides.

Form the spikes.
Repeat on the other sides.



Unsink from all sides.


Finished.
22.


# From the series <br> colors of the rainbow Orange shell 

Paper: Monocolor
Side of square : 21 cm
Density of paper : $80 \mathrm{~g} / \mathrm{m}^{2}$


Unfold from step 5.
Repeat steps 2-7 on the other sides.


Turn one layer from both sides.


Fold and unfold one layer.

10.

Fold and unfold one layer.


Fold and unfold one layer.

12.

Repeat steps 10-12 on the other sides.

Fold one layer down straight.

14.

View from above.
15.

Fold on a circle.


Repeat some times.


Give the model its final form.


Unsink from all sides.

21.

Finished.

 13.


View from above. Fold on a circle.


Repeat some times to turn up the corners.


Give the model its final form.
17.


Finished.

# From the series colors of the rainbow Green shell 

Paper: Monocolor
Side of square : 21 cm
Density of paper: $80 \mathrm{~g} / \mathrm{m}^{2}$


Repeat steps 2-6 on the other sides.


2-6.

Unfold from step 8.


Unfold to a square.


Fold down one layer.
The indicated points touch the center line.


Unfold from step 12.

Repeat steps 12-16 on the other seven sides.

17.


Sink corner C.

21.

Pull point $A$ and $B$. Bring together point $D$ and $F$.


Repeat steps 19-21 on other sides.

24.

Repeat a few times to turn up the corners.



Give spikes their final forms.
Repeat on every side. Give the model its final form.


Finished.
28.

# From the series colors of the rainbow Blue shell 

Paper : Monocolor
Side of square : 21 cm
Density of paper : $80 \mathrm{~g} / \mathrm{m}^{2}$




Repeat steps 2-7 on the other sides.


Press on each side, to flatten out the model.

10.


Repeat steps 9-13 on the other sides, than rotate model.


Repeat a few times to turn up the corners.


Unsink from all sides.


Give spikes their final forms.


Open to shape the model. To give model finished form.



# From the series colors of the rainbow Indigo shell 

Paper : Monocolor
Side of square : 21 cm
Density of paper : $80 \mathrm{~g} / \mathrm{m}^{2}$


Repeat steps 2-6 on the other sides, than rotate model.

6.

8.

Repeat steps 8-9 on the other sides.

Pull apart points $A$ and $B$.

12.


Repeat steps 11-13 on the other sides.


11-13.


Fold layers from both side.

18.

Squeeze from both sides.
Pleat fold, then close layers from both side.

19.

Repeat steps15-19 on the other sides.


Open. To give the model its final form.


# From the series colors of the rainbow Violet shell 

Paper : Monocolor
Side of square : 21 cm
Density of paper: $80 \mathrm{~g} / \mathrm{m}^{2}$

Crease a $4 \times 4$ grid.

3.

Repeat steps 5-6 on the other sides.
4.


Pull apart point $B$ and $C$ then sink point $A$.

11.

Repeat steps 8-11 on the other sides.

Fold down one layer then close the model.

13.


Unsink.


Repeat steps 13-15 on the other sides.


Repeat a few times to
 turn up the corners

19.

Sink.
20.


To form ledges from all sides.
22.



Open, than fold the model.

13.

Make pleat-fold from both sides

(to shift forepaws).


20.


Repeat steps
17-25 behind.


Top view.
of paper (step 30). .


28.

Open. Unsink a layer

30.

Give the model its final form.

31.

Finished.

32.



Create a small pleat fold.


Inside reverse-fold.



Crimp fold.

30.
31.

Swivel fold.
Repeat behind.
32.

> Give the model its final form.




The top layer is not shown.


Open sink.

24.



Give the model its final form.


Crease a $4 \times 4$ grid.

3.


Emperor penguin
Paper: Monocolor
Side of square : 35 cm
Density of paper: $80 \mathrm{~g} / \mathrm{m}^{2}$


Repeat steps 5-6

9.

10.

Repeat steps 8-10 on the other sides.

11.

4.



Fold right one flap. fold up one flap.


Fold left two flaps.

14.

Fold up one flap, then rotate model.

Fold right one flap.

16.

Fold down one layer, then turn over.

17.


Mountain-fold


Fold left three flaps.


Fold down one flap.
Fold right four layers.


Mountain-fold.
$A B$ it is approximately equal 2BC.


Fold down one flap.

28.

Mountain-fold


Reverse-fold.

36.

Fold left two layer.
To turn over.

29.

Mountain-fold.

30.


Pleat fold the corners to pull out the future arms.


Reverse-fold.


Crimp-fold.

37.

38.

Pleat-fold.

39. Sink.

40.

Give the model its final form.

41.

42.


Finished. 43.



Bring together points $B$ and $C$ with lines DE and FE. Fold down corner A.


Start to collapse on lines.


The model is not flat.
Flatten the top part.
20.



Make a pleat-fold on


Pull up the point.


Fold the future legs down.

32.
34.

35.

31.


38.

37.

39.

Close view of the future head. Make two small pleat-folds,

41. approximately on the same place that this is done below (almost crimp-fold).

42.

Crimp-fold through all layers.


Shape the wings and tail, and make the model more volumetric. Give the model its final form.
43.

45.


18.

Repeat steps 15-18 on the other side.

15-18. $\quad$ Sink (see step 21). $A B=B C$

19.

22.
21.

24.

Fold and unfold top layer.

25.

26.

Open sink (see step 30).

27.

28.

View from above.
Fold on the lines,
Bringing together points $B$ and $D$.

The top layer is not shown. Make a pleat fold.

30.

31.

Fold one layer.

32.

33.

Open sink.
Open sink.

34.

Open sink.

36.

Open sink.

38.


Open sink (see step 43).

42.


View from above.

37.


View from above.


View from above.

43.
35.

22-38. Repeat step (22-38) on the other side.
39.
41.

Sink similarly step 41.


View from above.
44.

Pull apart the paper.

45.

Lift a layer of paper from inside.
Fold on lines.

48.

51.


Fold the corner in pocket.

53.

Mountain-fold one layer.

55.


Fold and unfold one layer.

58.
57.

59.

60.

View from above.

62.
61.

Shift layer.

63.



View from behind.

Sink corner.

66.

67.

68.

View from behind.

71.

Repeat steps 55-71 from other side.
Open sink.

72.

73.

Fold on lines.

74.

Squash.



Give the heart its finished form.


View from above.



Open sink (see step 86).


Repeat steps 82-86 on the other side.

Shift the future head.

88.


Crimp fold.


91-93.
Repeat steps 91-93 on the other side.


Crimp fold.


Inside reverse-fold.

96.


The front view.

98.
99.

100.


Give the model its finished form.


Crease a $3 \times 3$ grid.

1.

5.


Place points $A$ and $B$ with point C.


## Beetle

Paper: Binocolor
Side of square : 21 cm Density of paper: $80 \mathrm{~g} / \mathrm{m}^{2}$


Repeat steps 4-6.

10.

13.


Sink corners D and E,
and create two pleat
folds.


Fold on lines.


18.

19.

20.



Unfold to step 22.


Fold up two corners.


Reverse-fold the edges.


Pull out and squash two corners.


Fold down one flap.

35.

$$
=2+x_{1}
$$

Fold down one layer from both sides.


Reverse-fold two corners.

Unfold.

30.

Reverse-fold the corner.

33.

Fold it back up as shown.
Fold up one layer from each side.


Pull out some paper and reverse-fold two corners.

34.

Fold down corner K.

36.

## Squash fold.



The line IM is parallel to line HL.


View from a different angle.

41.

Create a small pleat fold.


Create a small pleat fold.
Repeat steps 32-42.


Rotate own layer.
46.

Create a crimp-fold, then fold down one flap.
47.

49.

50.
Sink corner.


48.

Repeat steps 49-50.

51.


Give the model its final form.


Finished.



From the series "3-5-7-9" Cuttlefish

Paper: Monocolor
Side of square : 21 cm
Density of paper : $80 \mathrm{~g} / \mathrm{m}^{2}$
1.

Crease a $3 \times 3$ grid.


2.

5.

6.

7.

9.

10.

Repeat steps 6-10 from other side.

6-10.
12.


Bring together point $A$ and $B$.


## Fold and unfold one layer.


14.
15.

Fold right two layers.


View from other side.


15-1.

Fold and unfold one layer.

17.

Fold and unfold one layer.

18.

Fold and undold one layer.

19.

Fold left one clump of layers.

20.

Fold right two layers.


16-23. Repeat steps 16-23.


Repeat steps 25-27.
24.




Fold left three layers.

28.
29.

Fold left two layers.
Repeat steps 13-29.


Pull out the indicated point C .


Repeat steps 31-34.


31-34

35.

Fold inside.
Repeat behind.

36.

Unsink from a medium layer.


Give the model its final form.
38.

Finished.


Crease a $5 \times 5$ grid.


From the series "3-5-7-9"
Scorpion (version 1)
Paper: Monocolor
Side of square : 40 cm Density of paper: $60 \mathrm{~g} / \mathrm{m}^{2}$

Collapse along lines.
1.

.

2.

3.

Fold and unfold one layers.

6.

Focused view.

9.

10.

11.

Pull out the raw edge.
Fold down one flap.

12.
13.

17.
14.


Repeat steps 15-17 on the other side.

14.

18.
19.
16.

20.
21.


Fold and unfold one layer.

26.

27.

Pull apart points $A$ and $B$. Pull apart points A and B
Open sink (see step 31).


29. on the other side.


Fold and unfold one layer.
Fold and unfold one layer.


Pull apart points E and F to
 open the model. Apply steps $35-40$ to both sides.

35.

Pull points E and F.
Create lines LH and AI.
$\mathrm{EH}=\mathrm{HI}, \mathrm{El}=\mathrm{IJ}=\mathrm{JK}$.

36.

Create lines OP and PK, IO=OJ, OP parallel to AI.

39.

Open model to push point in inside.

42.

44.

Lower down point $B(M B=B G)$.

37.

Make a small pleat-fold from both sides.


Bringing together points I and J , create line PJ. Finally, flatten the model along lines.

Unsink layers of paper.

41.
43.
45.


Side view.

1. Create lines $A T$ and $T Q$.
2. Create lines $R U$ and $R Q$.

Press on line RS to form line RQ (OP=PQ). See step 48.


Pull point O down and open sink (see step 52).

51.

50.

Side view. Press point R, to combine the points $O$ and $Q$.


Fold up two flaps.

53.
55.
54.

Start pressing on point T

56.
(see steps 58-59)

57.

Side view. Create line XW and YW , then pleat-fold $(X V=W V)$.


Open sink (see step 62).

Create line SV, flattening the model.

63.

Fold down two flaps.

60.

61.

Side view.
62.

Open sink (see step 66).
59.


Fold up one flap.

67.


Mountain fold, than
fold down one flap.

69.

Repeat steps 44-72.

72.


Open sink (see step 78). ${ }^{73 .}$
76.

79.

Mountain fold from both sides.



Mountain fold.
Make a small pleat fold.


Repeat steps 90-93.

94.

95.


Give the model its final form.

100.

From the series "3-5-7-9"

## Termite (version 1)

Paper : Monocolor
Side of square : 21 cm
Density of paper: $80 \mathrm{~g} / \mathrm{m}^{2}$

Crease a $7 \times 7$ grid.


Fold on lines.
1.

2.


Reverse-fold.


3.


11.
12.

Open-sink (see step 15).

14.

Repeat steps 13-15.


Pull on point $B$ and open sink.



## Press and flatten the model.



Pull on point D.


Create line KL.


Pull up point J.


Fold down one corner.

Sink from both sides.


Repeat steps 30-41.
41.

43.


Create a small pleat fold, then place point N under pleat fold.


Fold down two flaps from both sides.


Fold and unfold own layer from both side.

50.

Sink corner. both sides, then fold up.

51.

52.

53.

54.

Create 3-4 small pleat folds on the top layer.

55.


Fold up two corners from both sides.


Create 3-4 small pleat folds on the top layer.


Mountain fold from both sides, than rotate model.


Create a pleat fold.

61.

Create two pleat folds.

66.

68.

69.

Unfold from step 61.

64.


Give the model its final form.

75.



Give the model its final form.

24.

Crease a $9 x 9$ grid.


From the series "3-5-7-9" Spider (version 1)

Paper : Monocolor
Side of square : 30 cm
Density of paper: $80 \mathrm{~g} / \mathrm{m}^{2}$

2.

Fold along lines.

4.

Reverse-fold.



Fold and unfold one layers.

12.

Reverse-fold.

15. open sink (see step 20).

18.

19.

17.

Side view.


Repeat steps 19-20 from other side.

21.

22.

23.

24.


Pull up points $B$ and $C$, and open the model.

33.

Side view.

1. Create line EG,
then mountain fold
2. Create linens DC, DE, HG and HB.
3. Create lines FE and FG.

4. 

Create a small pleat fold, than press model.

36.

Repeat steps 37-38.


Side view.

1. Create line KL.
2. Pull up point B.


Pull for point B.

41.

To press from both sides, then fold up corner M.


Fold and unfold one layer.

46.

Tpull up point M , then open sink (see step 48).

Repeat steps 47-48.
Side view.


49.

Fold and unfold one layer from both sides.

50.

To press on each side, than fold up.


Open model, than open sink (see step 56).

Mountain fold one layer from both sides.

55.

View from above.

56.


88

Fold up one corner


Side view.

62.

Fold and unfold one layer from both sides.


Repeat steps 61-62.


Open sink (see step 62).


Fold down all corners from both sides.

64.

Press on each side, then flatten.


Sink.
Sink (see step 71).
69.



Fold and Unfold one layer.

72.

74.


70-74.
Sink from both sides.


Repeat steps 54-56.


Fold two flaps up
on each side.


Give model its finished form.


From the series prehistoric reptiles


## Protoceratops

## Paper : Monocolor <br> Side of square : 21 cm <br> Density of paper: $80 \mathrm{~g} / \mathrm{m}^{2}$

Using this framework I managed to come up with more than 100 dinosaurs. Here are some basic examples of its use.


Reverse-fold the corners. Repeat behind.


Open sink (see step 7).

6.

Fold and unfold. Repeat on every side.



View from above.

7.

Fold and unfold.
Repeat behind.


Sink each corner.
Similarly to step 7
Fold and unfold. Repeat on every side.

10.

Sink each corner similarly to step 7. Repeat on every side


This is the base for many models of dinosaurs and other prehistoric animals.
11.


Pull out the point.
12.

13.

Flatten model.

14.
17.


15.

18.

19.

21.

24.

Pull point down, then

create mountain

25.

Inside reverse fold.

28.

Create small pleat fold.

29.

Crimp fold.

27.


31.

Crimp fold.

34.

37.

38.

Pleat fold.

35.


View from above. Pull up point $D$ (point $D$ from step 32).

36.

Flatten the future head.


Repeat behind.

40.

Repeat behind.
44.

43.

Do steps 46-48 simultaneously
on both sides. Create small pleat fold.

46.

48.

50.

Give model its finished form.

52.

47.

49.

51.

Finished.

53.



Fold and unfold one layer.
Fold and unfold one layer.

7.
6.

Open-sink.

8.

Sink corner (see step 11).
9.


Pull from point $F$.

10.

View from above.

13.


Pull out.

17.


6-18. Repeat step 6-18 on the other side.

Open.


Pleat fold,
$A G=G H, A H: A X=4: 11$.


20.




From the series prehistoric reptiles

## Parasaurolophus

Paper: Monocolor
Side of square : 30 cm
Density of paper: $80 \mathrm{~g} / \mathrm{m}^{2}$

## Start from step 12 of model <br> Protoceratops.

The top layer is absent. Do steps 2-3 simultaneously on both sides.

1. Fold (not completely).

The model will not lie flat. 2.
Pull up point $A$.


1. Pull point $A$ forward so that line $A E$ is formed.
2. To increase the sink, form line DC. The position of point $D$ is determined by sight.

3. 

Flatten model.

4.


Flatten model.

7.


Fold and unfold one layer.

9.


Pull points J and H and create line JG (points from step 14).

13.


View from behind.

14.






33.

35.

37.

Give model its finished form.

39.

Finished.

40.

34.

Repeat step 32-35 behind.

36.

Create a small indentation.

38.


## From the series prehistoric reptiles Eudymorphodone

Paper : Monocolor
Side of square : 30 cm
Density of paper : $80 \mathrm{~g} / \mathrm{m}^{2}$

## Start from step 12 of model <br> Protoceratops.

The top layer is absent. Do steps 2-3 simultaneously on both sides.

1. Fold (not completely).

The model will not lie flat. 2.
Pull up point A.

1. Pull point A forward so that line AE is formed.
2. To increase the sink, form line DC. The position of point $D$ is determined by sight.

3. 


3.

To pull from point (see step 7).


7.
6.

Flatten model.

8.

Open sink (see step 11).

11.

Pleat fold.
Point $B$ shold concern line $C D$.


Repeat steps $9-14$ behind.


View from inside.

14.

15.

## Pleat fold.

$\mathrm{EF}=\mathrm{FG}$, $\mathrm{EG} / \mathrm{EX}=73 / 155$.

17.

Fold down. The positions of lines are

21.

Open.

16.

Valey fold.

18.


Open sink.
19.


Jl is approximately 0.3JK. Repeat behind.

Open, than make a pleat fold (see step 25)


Pleat fold.


Mountain fold.
 from both sides.

Mountain fold.


Open sink.
25.


26.

Make small pleat fold.

30.
27.
28.

33.

1. Pleat fold
2. To form the leg.


3. 

Repeat behind.

36.

37.

Unsink.

39.

Give model its finished form.

41.

38.

40.

Finished.

42.



Pleat fold.
Point B should lie on line CD.
View from inside.
Repeat steps 6-11 behind.
11.


6-11.
12.

Open.

13.

Open sink.
10.


## Pleat fold.

$E F=F G, E G / E X=1 / 2$.

14.

Fold down. The positions of lines are determined by sight.

JI is approximately 0.3JK. Repeat behind.


Pleat fold.

22.

Mountain fold.

25.

Mountain fold.

26.

28.

29.

Make a small pleat fold.

30.

34.

Fold down one layer.
38.


Put the point into the pocket.
39.


Put the lust layer into the pocket.

42.

Give model its finished form.

Finished.


Put two layers into the pocket.

41.

1. Pleat fold.
2. To form the leg.

Repeat steps 27-31 behind.


Side view.


36.

40.



Paper: Monocolor
Side of square : 40 cm
Density of paper : $80 \mathrm{~g} / \mathrm{m}^{2}$



Fold and unfold. Repeat from every sides


Fold and unfold.
Reapeat behind


Reverse-fold the corners.


Similarly to step 15


Sink corner (see step 19).


View from above.


Sink corner under the layer of paper.


Repeat steps 22-23 behind.
Repeat steps 18-19 behind.
18-19.


View from above.
Fold and unfold. Repeat behind.


Fold one layer to the right in front and two to the left behind.


Sink the corner behind the layer of paper similarly to step 15.


Make two crimp folds.


Create line.


Fold back down,

Fold one layer to the left in front and two to the right behind.


Raise the upper layer and start to turn it out.


View from above.
Continue to turn out, collapsing on lines.

1. Press on point $C$ and create line BC.
2. Having simultaneously pressed on points $A$ and $B$, turn out a layer of paper.

combining the indicated points, to place line BC


Raise the first layer of paper.
Then, having pressed on line EF, Turn it out.

37.

Open.

Unsilk the ramaining layer.

Unsilk the ramaining layer.


Raise the layer of paper.


43.



GH is approximately 0.25 GI .


Repeat steps 32-47


32-47. behind.


Mountain fold.


Repeat steps 50-63 behind.


Steps 66-73 simultaneously on both sides.


Sink corner.


MK is approximately equal 0.25LK.


ON is approximately NJ . The position of lines are determined by sight. Fold inside and flatten.


Rotate layer, placing point $J$ in place of point K .

$S R$ is approximately $R Q$.


1. Make a pleat fold.
2. Pull up a layer of paper, then make the second pleat fold.

Mountain fold (see step 58).


View from inside.

59.

60.


1. Fold down.


Sink.

72.

Unsilk the ramaining layer.

74.

Front view

75.


View behind.

78.

## 1. Pleat fold.

2. Mountain fold.


Unsilk the layer.


83.


Repeat steps
85-87 3-4 times.


Repeat steps 79-89.
79-89


Squeeze on each side of the future horns, thus simultaneously creating lines and shaping the head.


Do steps 93-95
simultaneously on both sides.


Fold a layer to the lower edge.

Fold down the second layer so that it lies on the first.


Inside reverse fold

99.

100.

Unsink a layer of paper
from the middle (see step 102).


Unsink a layer of paper from the two pockets.

Crimp fold from both sides.

103.

Make a small pleat fold. Mountain fold a layer of paper on the neck if necessary.

104.

Do steps 105-107 simultaneously on

105.

106.

Make the feet.

107.

108.

109.

Paper : Monocolor
Side of square : 40 cm
Density of paper : $80 \mathrm{~g} / \mathrm{m}^{2}$



Fold and unfold. Repeart behind.


Revers fold the corners.
Repeat behind.
Open sink (see step 16).

16.


Fold and unfold. Repeart behind.


Sink each corner similarly step 15 .


Fold and unfold. Repeat on every side.


The top layer is absent.
Do steps 22-23 simultaneously on both sides.

1. Fold (not completely).

The model will not lie flat.
2. Pull up point A .

22.

1. Pull point $A$ forward so that line AE is formed.
2. To increase the sink, form line DC.


Repeart similarly steps 22-24.


Pleat fold.
$A F=F G, A G / E X=10 / 73$.

27.

The position of point D is determined by sight.


Press model.
23.

Open.


Valley fold.

28.


Fold down. Position of lines

Open sink.


Open, than make pleat fold (see step 35)

34.
is determinate by sight.

32.


Do steps 36-40 simultaneously on both sides.

36.

Mountain fold inside.

39.

40.
$\mathrm{HJ}=0.25 \mathrm{HK}$.

42.

47.

Pull down the corners, then mountain on both sides.


Crimp fold.
49.


Hind leg.

50.

Repeat steps 41-53 on the other side.


Give model its
finished form.

56.

Finished.

57.


From the series prehistoric animals Uintatherium

Paper : Monocolor
Side of square : 30 cm
Density of paper : $80 \mathrm{~g} / \mathrm{m}^{2}$



Unfold from step 9.

11.

12.

13.

16.

14.

15.

Rotate the model 90 degrees.


Point A from step 16.

19.

Pull out the point to unsink a layer of paper.


24.


> Pull out point B (see step 27).

Create a line between two points.



The model is not completely flat. Repeat steps 19-34.

38.
39.

Open.


42.

43.


Close while lifting the corner.


Repeat steps 44-49.
44-49.

50.


66.

67.

Repeat steps 58-67 behind.


Make two small pleat-folds.
Shape the horns.

Press from both sides.


70.


Repeat steps 69-71 behind.

72.

Do steps 74-78 simultaneuously on both sides.

73.

75.

79.

Finished.

77.

78.

80.

## Phororhacos

Paper: Monocolor
Side of square : 40 cm
Density of paper : $80 \mathrm{~g} / \mathrm{m}^{2}$

1.
2.
3.

Unfold.

4.

7.
8.

Point A from step 7.

13.

21.

Repeat steps 19-22.
19-22.



Fold on lines.
Points B and C are from step 13.


Model will not lie flat. Shift point G to touch line AD. Repeat on the other side. Flatten the model.


Crimp-fold from both sides.

33.


Side view.

35.


28-44. Repeat steps 28-44
from other side.

47.

Crimp-fold.
Crimp-fold.


View from other side.


53

54.

1. Form a point.


Repeat steps 50-58 on the other side.
2. Pull up the points.

56.

Clouse sink.

57.

58.


Outside reverse-fold.

62.

63.


61.

Crimp-fold from both sides, to shift the top layer.

Outside reverse-fold.

64.

65.

Crimp-fold the beak.
Lower down the future head.

66.


## Make a pleat-fold on the leg.


69.

Repeat steps 69-71 on the other side.
72.


70.
71.


Give the model its finished form.

74.

Finished.



## Mammoth

Paper : Bicolor
Side of square : 70 cm
Density of paper: $60 \mathrm{~g} / \mathrm{m}^{2}$
If you wish to receive good results, I recommend that you fold this model two times that is better it to feel.


14.


Close-sink from both sides.





33.


Place the white layer below the next layer.
Do not wrap it.

39.

Fold and unfold (Make two parallel lines).

42.

Start to sink.


40.

43.

Pleat-fold from both sides.

46.

41.

44. Pleat-fold.
47.

45.

## Repeat steps 31-47.


51.

54.

57.

52.

View from inside.
Open.

53.
55.

56.

Part of the top layer not shown.
Pleat-fold.
Unsink.


Repeat steps 50-59.

60.

61.
59.

Pleat-fold through all layers of paper.


63.

65.

66.


69.

70.

Do steps 67-76 simultaneously from both sides.


Part of the top layer is not shown.

71.

72.

75.
73.

74.


76.

77.

Give the model its finished form.

78.

Finished.

Pull down corner B (step 25) to create the bottom jaw.

79.

80.



## Ichneumonidae

Paper : Bicolor
Side of square : 90 cm
Density of paper: $60 \mathrm{~g} / \mathrm{m}^{2}$

1.

5.


Start to fold on the lines. Bring together points A with $B$ and $B$ with $C$.

11.


View from within.

13.

14.

15.

Fold one corner down.

16.

Fold and unfold from both side.


Side view.
Open sink.

19.


Open sink.


Repeat steps 20-23.

24.

Fold the flap down.

26.


Open sink.


Side view.

33.

Repeat steps 32-33.

36.

Fold down one layer.


For steps 44-50, only fold the top layer


Unfold to step 38.
Fold and unfold one layer.


Sink along lines.


Push then flatten.


Sink in and out.


Repeat steps 38-61.


Open.

65.

66.
64.



Repeat steps 84-87 behind.


Fold right one layer.



Turn out the top layer.



Fold one layer to the left.



Make two pleat-folds from both sides.


Squshe-fold from both sides, then fold up.

101. 100.

Sink corners inside.


Sink.


Unsink.


## Sink.



Sink.


Fold down 3 layers (the future legs) at a $90^{\circ}$ angle.


Press from both sides, and shift down the top layer.


Repeat steps 118-119 3-5 times.



Pleat-fold.


Unsink paper from the top layer.


Close view of the future head. Make two small pleat-folds.

132.
133.
131.

Give the model its finished form; make it so that the feet seem as
Shift the wings. long as possible (look at photo).


Finished.



Lucanus Swinhoei
Paper : Monocolor
Side of square : 70 cm
Density of paper: $60 \mathrm{~g} / \mathrm{m}^{2}$

1.
2.

5.
3.

4.

6.
7.

8.

10.

11.

12.

15.
§ Unfold to step 11.

18.

16.
13.

17.
14.

19.


Reverse-fold two corners.
24.

27.

25.


Fold and unfold own layer.

Reverse-fold two corners
29.

Open -sink (see step 33).
Fold and unfold own layer.


Reverse-fold two corners.

26.


30.




Fold the edge back to the side.

36.

Fold the edge back to the side.

39.

Closed-sink the long edge.

37.

Closed-sink the edge.

40.

Fold the edge to the center, spreadsinking the top and bottom.

38.

Fold one layer to the right.


Repeat steps
$35-40$ on both sides.

42.

Fold and unfold one layer.

45.

Fold own layer to the left.


Closed-sink the long edge.

46.

Fold the flap down.

48.

Raise the top layer. Closed-sink the flap.

49.

50.

Fold own flap up.

51.

Repeat steps $35-51$. Fold down the small corner.
Sink the corner.

53.

54.

55.

Fold own layer on the right.
Repeat steps 35-40
on both sides.
Fold one layer to the left.
Fold own flap up.
56.


58.

59.

Repeat steps 35-40 similar.
Fold one flap up.
Repeat steps 45-47.

Fold two flaps down.

60.

61.

62.

63.

Repeat steps 59-63.

64.

66.

Fold and unfold one layer.

67.

Press from both sides to shift up the top layer.
68.

Closed-sink.
Fold one flap up.



69

70.

Fold one flap up on each side, and fold two flaps down behind.


Fold and unfold one layer.
71.

Press from both sides to shift down the top layer.

75.


Pleat fold. Position of lines is determined by sight.

82.
81.

Pleat fold. Position of lines is determined by sight.

84.

85.

Fold and unfold one layer.

86.

Closed-sink.

87.

Closed-sink.

88.

Open.

89.

Repeat steps 86-90.

93.

92.

95.
94.

Crimp the six leg.


Crimp the leg.


Closed-sink.
Repeat steps 100-101 behind.

102.

Reverse-fold the corner.
Reverse-fold the corner.
Reverse-fold the remaining bit.


Repeat steps 99-106 in front.
99-106.


Repeat steps 102-106.

108.

109.


Open on the middle.
Unsink

125.

126. Pull out from marked points.


Form thorns.

130.

131.

The top layer is not shown. Reverse-fold the corner.

133.

Sink.

134.
132.


Reverse-fold the corner.
Reverse-fold the remaining bit.

136.

Pull out from marked points.


Shift the layer from behind. Form the mandible.

142.

143.

144.

Repeat steps 133-144.


Make some small pleat folds.

148.

Fold one flap doun.

150.

152.


Make two small pleat folds.

155.

156.


Give the model its finished form.

158.

Finished.



## Spider (version 2)

Paper: Monocolor
Side of square : 35 cm
Density of paper: $60 \mathrm{~g} / \mathrm{m}^{2}$

3.

6.

7.

介 Unfold.

10.
8.
9.


Unfold from step 14.

21.

19.

Unfold from step 19.



In the following steps, all unnecessary lines made in the previous steps, will not be shown.

30.


8.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |


11.

12.

13.

16.

17.


18.

19. Unfold from step 17


Repeat steps12-22.

23.

Unfold from step 24.

26.
27.
24.

29.
30.

31.

33.

34.

35.

36.

Pull on points A, C, D, F (step 37), make lines $A B, B C, D E$ and $E F$.


Collapse the model completely.

37.

Fold on lines.

38.

Pull apart the points and unsink a layer of paper.

41.

42.

Make line GH
(see step 46).


Repeat steps 44-46.


Fold down corners.

Fold down 3 pairs of corners.


Pull the points, and shift the corners down as far as possible.


Unfold from step 53.

53.

54.

55.

## Open sink.



Repeat steps 53-58.
Reverse-fold. Reverse-fold.


Pull the points and

per from the pleats.


The top layer is not shown.



Shift the inner corners.



Give the model its finished form.


Finished.

84.


## Crab

Paper: Monocolor
Side of square : 70 cm
Density of paper : $60 \mathrm{~g} / \mathrm{m}^{2}$




Fold on lines. 22.

23.

25.

29.


Pull from the points, and make two pleat-folds.

Pull from the points, and make two pleat-folds.

Pull from the points, and make two pleat-folds.

44.


46.

41.

Pull from the points, and make two pleatfolds
(similarly to steps 41-42).

43.

Fold on lines.

45.

Make the creases between the points (step 38), then press the sides.


Press from each sides, and make lines between


Pull from the points, and unsink a layer of paper. Press from each side, and make a pleat-fold.


Pull from the points, and unsink a layer of paper.

53.

Press from each side and shift up the top layer.

55.

56.

57.


Part of the top layer is not shown. Pull from the point and unsink a layer of paper.


Sink inside.


Pleat-fold.


Repeat steps 62-63.

60.

Pull from the points, and unsink a layer of paper.


Swivel-fold.
View from behind.


Pull from the point, and unsink a layer of paper.



Repeat steps 62-63
from below.

69.



Sink inside.


Sink.


Repeat steps 59-79.
Pull from points N and L , make lines NP, MP, MO and LO (step 38).


Fold on lines to collapse.
Press and flatten the legs.




Unsink the top layer of paper.


Open.


Give thorns their finished form.

101.



106.

Finished.



## Shrimp

Paper : Monocolor
Side of square : 70 cm
Density of paper : $60 \mathrm{~g} / \mathrm{m}^{2}$

1.

2.
3.

4.
5.
6.

7.
8.
9.



12.
10.
11.

13.
14.


Repeat step 21.

22.

Fold on lines.


Model not plane.
Open sink (see step 25).

23.

Model not plane.
Open sink (see step 27).

26.


Fold on lines.

31.

30.

Pull from points, unsink corners.

33.

34.

Press from above, make to lines BD, DC, BE and EC. Repeat from behind.


Make lines $A B$ and $A C$. Repeat from behind.


Pull from point.
Squash.

42.


Sink two corners from both sides.

Reverse-fold.
Reverse-fold.



Pull from points, unsunk layer of paper.


Model not plane.

51.
50.

54.


56.

57.

Press from each side, than squash.

61.

65.
62.


Sink corner.
58.

Sink corner.

63.

66.


## Fold down four corners.


70.

The part of top layers not show. Open sink.


Repeat steps 68-70.


Pull from point, shift up the corner (the fifth from above).

73.


The part of top layers not show.



201


Repeat similar steps 81-82 with lower layer.


Fold down six flaps from both sides.



Fold up two flaps from both sides.


91.

93.


Repeat steps 91-93.


Valley fold four corners
from both sides.
Fold down corners.



To give form antennas.


104


To give form antennas.

106.

Make seven pleat-fold on the top layer.


To give model
the finished form.

111.



## Spiny king crab

Paper: Monocolor
Side of square : 100 cm Density of paper : $60 \mathrm{~g} / \mathrm{m}^{2}$

To think up this model it took me about 2 hours, and to fold it about 40 .

3.

4.
5.
6.

7.

9.


8.

10.



Make 28 pleat-fold from both side.
13.

15.


22.

23.

24.

26.

27.

28.

31.
32.



Fold and unfold one triangle.

33.

Open sink.

37.
38.


Open sink from all sides.

41.

Make pleat-fold. Repeat behind.

42.

Side view.
Make two pleat-fold. Repeat behind.

Repeat steps 35-42a with



View from above.Unsink one layer of paper.


65.
64.

Repeat steps 72-73 and 75
To make four of some thorns gradually passing in one.


77.

To pull from points.


To press (make to thorn from bo sides).


Fold down one layer.

82.

83.

Repeat step 65.


To pull from points.

84.

86.

88.

To combine steps 84-87,
91-92, 93-101,102-103,104-106,
make a maximum quantity of thorns.

90.

To pull from points.

91.

To pull from points.

93.

Repeat steps 93-94.

92.

94.

View from above.


96.


To pull from centr.

98.

Having pressed on each side to make small thorn.


Sink.
99.

To press thorn.

101.

To press thorn.

103.

Having pressed on each sides to make two small thorn.

105.

102.

To pull from points.

104.

106.

To make pleat-fold, then to turn in edges.
Having shifted thus back legs.

107.

To make eyes.
To give model the finished form.

109.


## Madules Serie




Triangle (version 1) P. 219


Triangle (version 2)
P. 220


Square (version 2)
P. 224


Triangle (version 3)
P. 221


Triangle (version 4)
P. 222


Square (version 1)
P. 223


Pentagon
P. 225


Hexagon
P. 227

1.

2.

Unfold.

4.
6.
9.
12.


## Triangle (version 1)

Paper: Monocolor
Density of paper: $80 \mathrm{~g} / \mathrm{m}^{2}$


5.

10.
7.

8.

11.

13.


Triangle (version 2)
Paper: Monocolor
Density of paper : $80 \mathrm{~g} / \mathrm{m}^{2}$
Start from step 9 of model Triangle (version 1).
1.

2.

3.

4.

Put the corner under the top layer.
Finished.



Triangle (version 3)
Paper: Monocolor
Density of paper : $80 \mathrm{~g} / \mathrm{m}^{2}$
Start from step 9 of model Triangle (version 1).
1.

2.

3.

4.

Only one layer is taken and put inside the pocket.

6.

1.

2.

3.

Start from step 9 of model Triangle (version 1).


Place the flap inside the pocket.

7.

Finished.

8.

1.

3.

7.

2.

Square (version 1)
Paper : Monocolor
Density of paper: $80 \mathrm{~g} / \mathrm{m}^{2}$

4.

5.

Place the corners in the pocket.

10.
6.

Finished.



Put the layer in the pocket.

7.

Put the top layer in the pocket.

8.

9.

Finished.


8.

9.


Fold up one layer.

13.


Put the corner in the pocket.

14.
15.

Sink between the second and third layers.


Put the corner in the pocket.
Put the corner in the pocket.

17.

18.

Finished.



From the series

## Hexagon

Paper: Monocolor
Density of paper: $80 \mathrm{~g} / \mathrm{m}^{2}$

2. 1.

Part of the top layer is not shown. Open sink.

Part of the top layer is not shown.


Part of the top layer is not shown. Open sink.

5.


Put the corner in the pocket.

9.
6.

4.

8.

Put the corners in the pockets.

12.

13.

Finished.


$X=2 a$

$X=a(1+4 \sin 54) \sim 4.236 a$

$x=4 a$

X

$X=5 a$

## Plents for Dinasaurs Park



## Trunk (module №1)

Paper: Monocolor

1.

3.
4.

Squeeze from below.

5.

6.
7.

8.

Finished.

9.

## Trunk (module №2)

Paper : Monocolor Density of paper: $80 \mathrm{~g} / \mathrm{m}^{2}$
1.

3.
4.

Squeeze

6.

7.

230


Trunk (module №3)
Paper: Monocolor
Density of paper: $80 \mathrm{~g} / \mathrm{m}^{2}$


Turn up the edges.


Fold inside.

5.

6.

Support for bushes.

7.



24 mm

Repeat steps 2-4 nine times. The position of lines is determined by sight.

3.

4.

10.

14.

Repeat steps 13-14 on the other segments.

15.

13.
Give the model its finished form.

Finished.

16.
18.

17.





Front №3
Paper: Monocolor
Density of paper : $80 \mathrm{~g} / \mathrm{m}^{2}$

1.
2.

3.

4.
5.

Sink the corner inside.
7.
6.



Pres

## Front №4

Paper: Monocolor
Density of paper : $80 \mathrm{~g} / \mathrm{m}^{2}$

2.

3.

4.
6.

7.

Finished.

8.

9.

Insert a sealant if necessary.
10.

13.

11.



Front №5
Paper: Monocolor
Density of paper : $80 \mathrm{~g} / \mathrm{m}^{2}$

2.
3.




85 mm

Spruce (branch)
Paper: Monocolor
Density of paper: $80 \mathrm{~g} / \mathrm{m}^{2}$

Repeat steps similar to step 2-11 from frond №4.


$244$

N
인

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№ 7



1.
3.


4.

Horsetail (module №1)
Paper : Monocolor
Density of paper : $80 \mathrm{~g} / \mathrm{m}^{2}$

Fold on all sides.


Press from all sides.

6.


Twist into a tube.
Finished.

7.

Horsetail (module №2)
Paper : Monocolor
Density of paper : $80 \mathrm{~g} / \mathrm{m}^{2}$

Put in module № 2, then twist the whole thing.

3.

Horsetail (module №3)
Paper : Monocolor
Density of paper: $80 \mathrm{~g} / \mathrm{m}^{2}$


Spread out the model.
Make pleat folds.

## Horsetail (module №4)

Paper: Monocolor
Density of paper : $80 \mathrm{~g} / \mathrm{m}^{2}$

2.
3.


Finished.
4.


Finished.


