SOMSO® MODELLE

Zoology • Botany

MedicalSimulator
INNOVACIÓN EN EDUCACIÓN

The new SOMSO® main catalogue A77 has been published

Catalogues are a tangible and visible documentation of a company's level of performance. In that respect, this present main catalogue A 77 is evidence of the achievements of a family business, which is currently in the process of being handed over to the 5th generation.

All this would not have been possible without the loyalty of a clientele that recognises the immense amount of diligence, costs, planning, and hard work involved in the development and the creation of all SOMSO® Modelle. This commands gratitude and is at the same time an obligation to continue working according to our fathers' and forefathers' motto:
"Better is the enemy of good".

May this catalogue be a guide-book for all those who follow this principle when they make their choices.

Hans Sommer, Managing Director
Sonneberg and Coburg, March 2020

SINCE 1876

Nature is our Model SOMSO® Modelle

On 17th July 1876, Marcus Sommer senior founded the SOMSO Workshops in Sonneberg, Thuringia for the manufacture of anatomical models which, back then, were all made exclusively by hand. Son Fritz, grandson Marcus junior, his great-grandson Hans, and great-great-grandson Louis-Benedikt are responsible for the company SOMSO Modelle GmbH within the framework of its worldwide recognition.

A family business of over 140 years is an incentive, as well as a duty for the future, to continue the work of generations past. The tradition of the family business continues, with the 5th generation being appointed to the management body.

Taking the highest pedagogic and scientific requirements as a benchmark, SOMSO® has been manufacturing originals for more than 140 years. Their shape and functionality, as well as the fact that they can be disassembled, make them the tried and tested basis for stimulating teaching. **"Nature is our model"** - this is the guiding idea for the realistic representation of nature as the prototype.

Founder
Marcus Sommer Snr
∗ 14th Nov. 1845 - † 21st Jan. 1899

Fritz Sommer
∗ 27th Dec. 1879 - † 26th Sept. 1934

Marcus Sommer Jnr
∗ 25th Feb. 1907 - † 26th Dec. 1986

SINCE 1876

The SOMSO® Sun - a symbol for quality

The figurative mark of the SOMSO® Sun, the word marks SOMSO® and SOMSO-PLAST® as well as the green base for our models are nationally and internationally registered trademarks. Our manufacturing and delivery programme includes anatomical, zoological, and botanical teaching models. Continuous new developments and the on-going support by renowned scientists and experts guarantee up-to-date, solid, and pedagogically well-founded imparting of knowledge.

Examples of registration documents in Canada, India, the USA, and Japan.

SOMSO® copyright protection

SOMSO® Modelle are protected by copyright and bear the following nationally and internationally registered trademarks:

Word marks: SOMSO® and SOMSO-PLAST®

Figurative mark: SOMSO® Sun

Position mark: SOMSO®-base green

SOMSO® warranty

As a manufacturer recognised in professional circles, SOMSO® issues a 5-year warranty on service life and operational reliability of all models (proper use provided), with the exception of those which are not produced in SOMSO-PLAST®.

SOMSO® GUARANTEE 5 Years

SOMSO® philosophy of spare parts

Even after decades, SOMSO® Modelle guarantees the availability of spare parts. This is shown using, as examples, organs of the inner ear of models DS 3 and DS 5 (see page 45).

If necessary, an agreement can be reached for corrective maintenance to be performed in our workshops, on the basis of an estimate of costs.

SOMSO® MUSEUM SONNEBERG

Nature is our Model SOMSO® Modelle

Important preliminary Information

1. Scientific collaboration
Close collaboration with scientific institutions ensures that SOMSO® Modelle are consistently created and further developed in compliance with the current state of scientific knowledge.

2. SOMSO-PLAST®
SOMSO® Modelle - high-quality teaching materials for schools and universities since 1876 - the majority of which are made from virtually unbreakable SOMSO-PLAST® and consequently marked with an 'S' in the order number, e.g. AS 1.

3. Technical specifications
The versions, dimensions, and weights stated in the catalogue can change as a result of technical or scientific improvements. SOMSO® Modelle are mainly supplied with model descriptions that are prepared by proficient scientists.

4. Functional models
Functional models make biological processes more understandable. In this catalogue, all functional models are marked with an Ⓕ. All flexibly mounted skeleton parts of category QS are included in the functional models. Functional models are subject to normal wear and tear, due to the nature of the material.

5. SOMSO® characteristics
SOMSO® Modelle feature true-to-life representation technology, attention to detail, and can be disassembled.

6. Manufacturing
SOMSO® Modelle are manufactured by a highly qualified and skilled workforce - mainly by hand and exclusively in Sonneberg and Coburg.

7. Copyright
SOMSO® Modelle as well as the descriptive texts are protected by copyright. In case of any reproductions or unauthorised depictions of SOMSO® Modelle as well as in case of any unauthorised copies of the model descriptions, we reserve the right to assert injunctive reliefs and claims for damages. All rights regarding our catalogues are reserved, especially those of reproduction, copying of illustrations, duplication, translation as well as any form of photomechanical, electronic or digital reproduction, also in extracts.

The SOMSO®-Museum at the parent company in Sonneberg / Thuringia

On the occasion of the company's 125th anniversary, family Sommer opened the SOMSO® Museum at the parent company in Sonneberg/Thuringia in 2001. Ten stations, which are constantly updated, showcase the multifaceted model culture of more than 140 years of company history. For more information, go to www.somso-museum.de

Models of the Domestic Cat, Felis silvestris catus:
Figure on the right: ZoS 27
Figure on the left: ZoS 27/1
(See catalogue page 137)

Vertebrates

Cow,

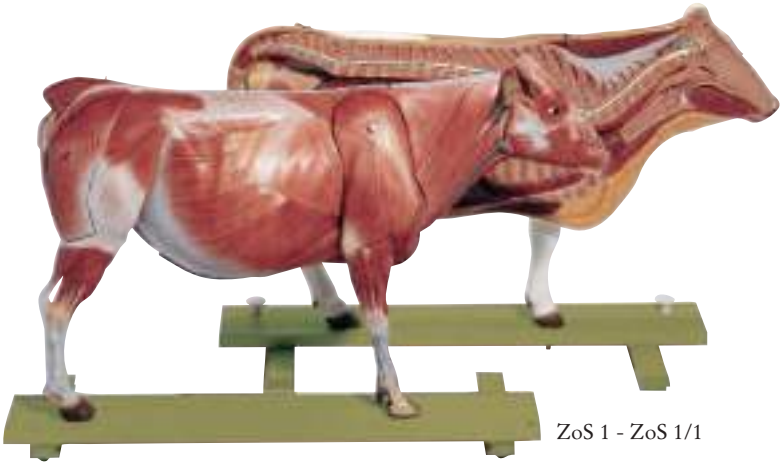
Bos primigenius taurus

Nature is our Model SOMSO® Modelle

Zoology 1

Introduction to zoology:

The order the offered SOMSO® zoology models are arranged in is mainly based on systematic aspects.



ZoS 1 - ZoS 1/1

ZoS 1 Visceral organs and removable muscles
(the model can be disassembled to also correspond to ZoS 1/1, whose stomach additionally disassembles into 3 parts - see fig. ZoS 6/1)

ZoS 1 - ZoS 1/1 Left half of the body (hide)

ZoS 1 - ZoS 1/1 Right half of the body (muscles) with visceral organs

ZoS 1 · Cow

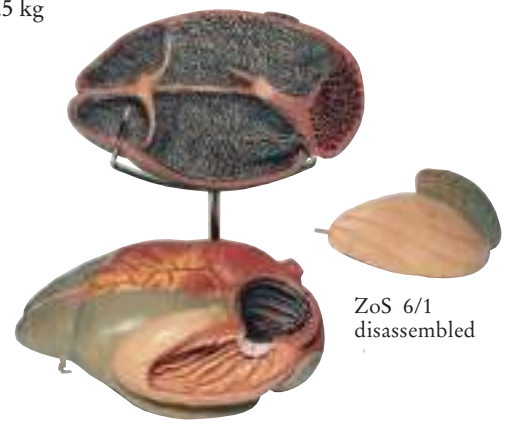
About 1/3 natural size, in **SOMSO-PLAST®.** Median section. Separates into two halves. The left side shows the hide, the right side shows the surface muscular system. Right foreleg with shoulder blade and the biceps of the thigh are removable. The udder shows suspension, network of blood and lymphatic vessels. Visceral organs can be disassembled: Lungs, heart (2 parts), small and large intestine, ruminant stomach, uterus, and half of the udder. Showing the rumen puncture. **Comprises 11 parts.** Mounted on a green pull-out base with castors. Height: 54 cm, width: 85 cm (=length of the model), depth: 28 cm, weight: 17.4 kg

ZoS 1/1 · Cow

About 1/3 natural size, in **SOMSO-PLAST®.** As model ZoS 1 but with ruminant stomach that can be disassembled - rumen, reticulum, omasum, abomasum. **Separates into 13 parts.** Mounted on a green pull-out base with castors. Height: 54 cm, width: 85 cm (=length of the model), depth: 28 cm, weight: 17.5 kg

ZoS 6/1 · Ruminant Stomach of the Cow

1/3 natural size, in **SOMSO-PLAST®.** Rumen and reticulum separate into 2 halves vertically and show the relief of the stomach lining; omasum and abomasum can be opened. **Separates into 3 parts.** Removable on a stand with green base. Height: 35 cm, width: 28 cm, depth: 18 cm, weight: 2.5 kg



ZoS 6/1 disassembled

ZO 3 · DEMONSTRATION MODEL OF THE COW

1/4 natural size. The left side shows the hide, the right side shows the skeleton with the topography of the thoracic and abdominal intestines. Fore and hind legs removable. **Separates into 3 parts.** On a green base. Height: 41 cm, width: 66 cm (=length of the model), depth: 22 cm, weight: 4.7 kg

ZoS 5

ZoS 5 · MODELS OF SETS OF COW'S TEETH

In **SOMSO-PLAST®. Natural size** of the lower jaw showing ten different stages of growth: 14 days, 1 year, 1 1/2 years, 2 years, 3 years, 4 years, 5 years, 9 years, 14 years, and 18 years. **In one piece.** Individually mounted on green bases. Measurement of a single model: Height: 10 cm, width: 12 cm, depth: 12 cm, weight of the series: 1.8 kg

ZoS 17 · COW HOOF

Natural size, in **SOMSO-PLAST®.** Cast of a natural, prepared left front cow hoof. **Separates into 6 parts.** Removable on a green base. Height: 39 cm, width: 18 cm, depth: 26 cm, weight: 1.3 kg

ZoS 17

Zo 4 disassembled

Zo 7 disassembled

ZO 4 · NOSE OF COW

Natural size, modelled from a natural preparation. The model shows the nasal cartilage, glands, nasolabial plate, muscles, and bones. Folds and passages inside. **Separates into 2 parts.** On a green base. Height: 25 cm, width: 25 cm, depth: 20 cm, weight: 2 kg

ZO 7 · KIDNEYS OF THE COW

Natural size. With the inflowing and outflowing vessels, one kidney can be detached to show the pelvis of the kidney and the papillae. On a green board. **Separates into 2 parts.** Height: 35 cm, width: 48 cm, depth: 8 cm, weight: 2.2 kg

ZoS 17 disassembled

ZoS 16

ZoS 16 disassembled (without stand and base)

ZoS 16 · UDDER OF THE COW

Natural size, in **SOMSO-PLAST®.** After Prof. Dr. Vollmerhaus and Prof. Dr. Waibl. **Separates into 4 parts** in sagittal and vertical section, showing the arteries, veins, lymphatic vessels and milk passages and the four glandular regions. Removable on a stand with green base. Height: 35 cm, width: 39 cm, depth: 28 cm, weight: 5.5 kg

ZO 12 · UTERUS OF THE COW

Natural size. With removable fetus. **Comprises 2 parts.** Mounted on a green board. Height: 30 cm, width: 48 cm, depth: 13 cm, weight: 3.2 kg

Zo 8

ZO 8 · FEMALE GENITAL ORGANS OF THE COW

Natural size. Horn of uterus and vagina open. **In one piece.** Mounted on a green board. Height: 68 cm, width: 45 cm, depth: 9 cm, weight: 4.3 kg

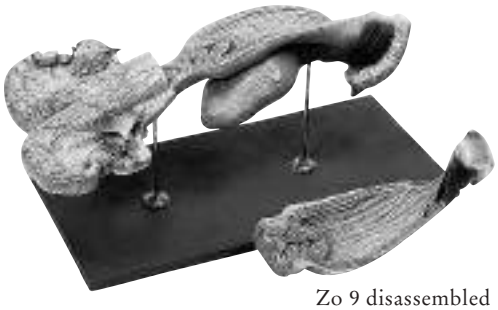
Zo 10

ZO 10 · COW - FEMALE PELVIS WITHOUT FETUS

About 2/3 natural size. Median section, uterus removable. **Comprises 2 parts.** On a green base. Height: 63 cm, width: 46 cm, depth: 30 cm, weight: 4.8 kg

ZO 9 · FEMALE GENITAL ORGANS OF THE COW

Natural size. Vagina detachable. **Comprises 2 parts.** On a stand and green base. Height: 25 cm, width: 38 cm, depth: 61 cm, weight: 3.8 kg



Zo 9 disassembled

ZO 13 · GENITAL ORGANS OF THE BULL WITH URINARY TRACT

Natural size. In one piece. Mounted on a green board. Height: 54 cm, width: 76 cm, depth: 11 cm, weight: 6.6 kg

Zo 13

Zo 11 Detail - B: Uterus with fetus in breech presentation

Zo 11 Detail - A: Uterus with fetus in cephalic presentation

ZO 11 · COW - FEMALE PELVIS WITH INTERCHANGEABLE UTERUS

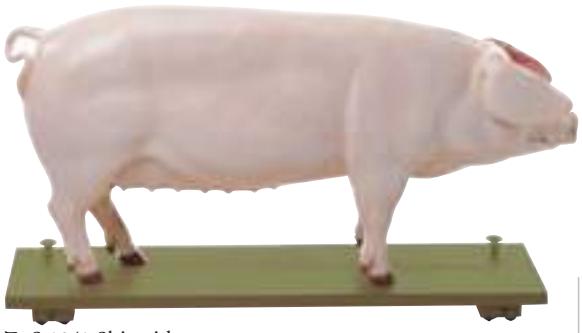
About 2/3 natural size. Separates into 5 parts. A. Fetus during birth in cephalic presentation and B. Fetus during birth in breech presentation. On a green base. Height: 64 cm, width: 68 cm, depth: 32 cm, weight: 18.5 kg

ZO 19 · MODEL OF THE PIG FOR DEMONSTRATION

1/3 natural size. Right side shows the macroscopic anatomy, the left side the skeleton with topography of the thoracic and abdominal organs. The fore and hind legs of the skeleton are removable. **Comprises 3 parts.** On a green base. Height: 35 cm, width: 60 cm (=length of the model), depth: 20 cm, weight: 3.8 kg

ZOS 18/1 · MODEL OF A BREEDING PIG (DAM)

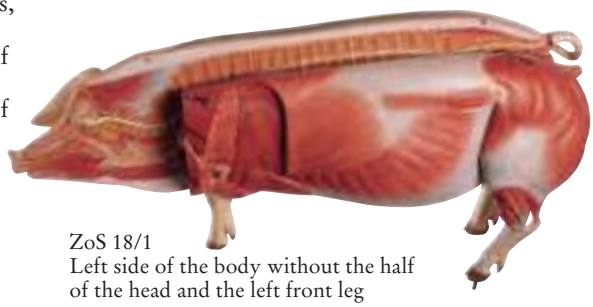
Approximately 1/2 natural size, in **SOMSO-PLAST®.** Based on a breeding pig from the Bavarian State Institute for Animal Breeding in Grub. Right side shows the skin, the other side shows the muscular system. The model is mounted on a green base which can be pulled out and separates into two halves medially. The left half of the head showing the muscular system, the main blood-vessels and glands (the parotid gland can be removed) as well as the auricular cartilage is removable, as is the left foreleg. After separating both halves, the left side shows the thoracic and abdominal cavity, the right side the thoracic and abdominal organs. **Separates into 17 parts:** the right half of body, left half of body, left half of head, parotid gland, left front leg, one lung, heart (2 parts), liver (2 parts), stomach (2 parts), pancreas, small intestine, large intestine, renal fat, and half of uterus. Height: 50 cm, width: 102 cm, (= length of the model), depth: 28 cm, weight: 21.8 kg



ZoS 18/1 Skin side

ZoS 18/1 Median section with visceral organs

ZoS 18/1
Individual parts



ZoS 18/1
Left side of the body without the half of the head and the left front leg

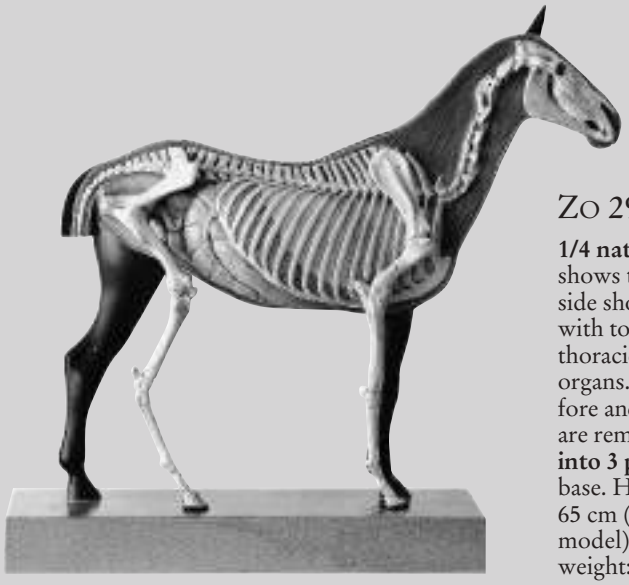
ZO 20 · UTERUS OF THE PIG WITH FETUS

Natural size, in one piece. Mounted on a green board. Height: 37 cm, width: 60 cm, depth: 7 cm, weight: 2.7 kg

Zo 21 disassembled

ZO 21 · STOMACH OF THE PIG

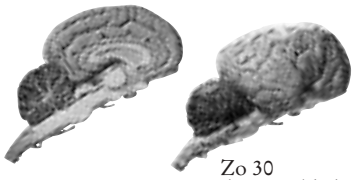
Natural size. Can be opened to show the relief of the folds of the mucous membrane. **Separates into 2 parts.** On a stand and green base. Height: 38 cm, width: 23 cm, depth: 18 cm, weight: 1.2 kg



Zo 29 · Horse

1/4 natural size. Left side shows the hide. The right side shows the skeleton with topography of the thoracic and abdominal organs. The skeletons of the fore and hind extremities are removable. **Separates into 3 parts.** On a green base. Height: 59 cm, width: 65 cm (= length of the model), depth: 20 cm, weight: 4.1 kg

Zo 30



Zo 30 disassembled

Zo 30 · Brain of the Horse

Natural size. Median section. **Separates into 2 parts.** On a stand with green base. Height: 22 cm, width: 18 cm, depth: 18 cm, weight: 610 g

Zo 31 · Eyeball of the Horse

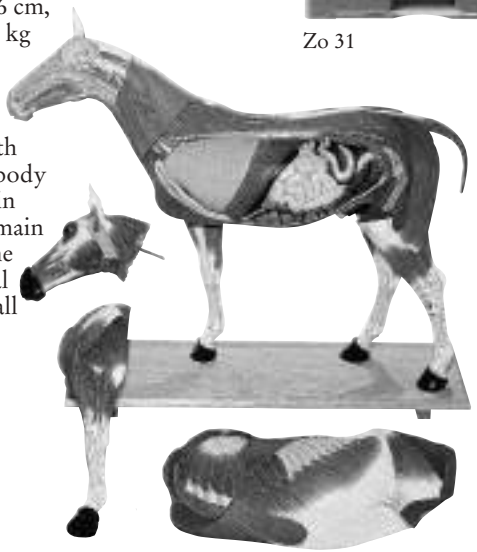
Enlarged 5 times linearly, cut horizontally, corium, vitreous humour, and lens removable. **Separates into 5 parts.** On a stand and green base. Height: 27 cm, width: 18 cm, depth: 18 cm, diameter 16 cm, weight: 1.2 kg

Zo 31 disassembled

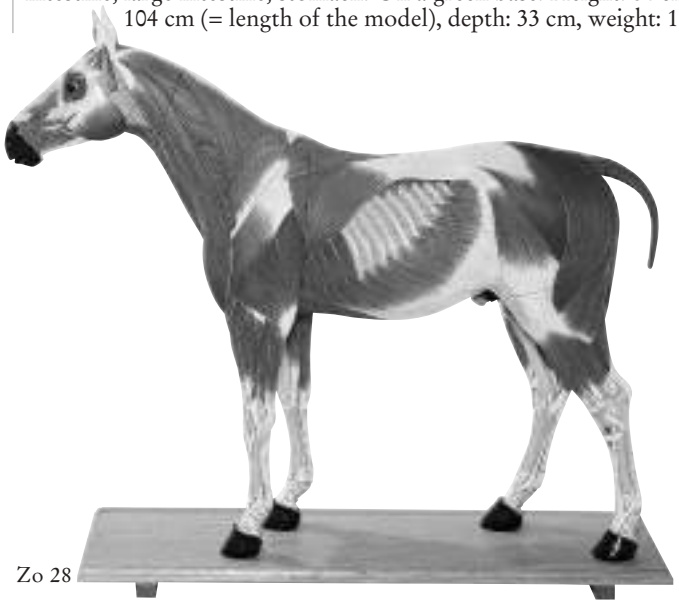
Zo 31

Zo 28 · Horse

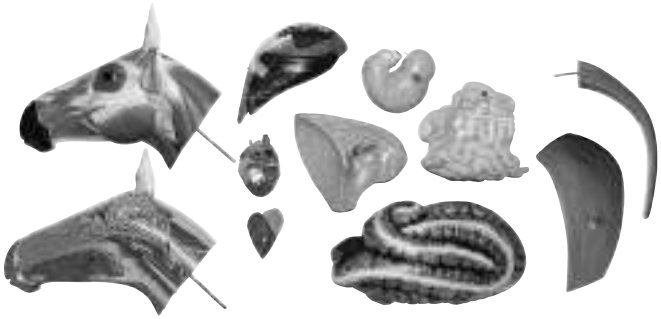
Approximately 1/3 of the natural size. Shows the muscle structure on both sides, torso ventral separated along the dorso-ventral axis. Left side of the body together with foreleg is detachable, thoracic and abdominal organs shown in their exact topographic position as well as the male urogenital system and main blood vessels. **Separates into 14 parts:** right side of the body, left side of the body, right side of the head, left side of the head, left foreleg, left abdominal cavity, superficial gluteal muscle, tail, heart (2 parts), lungs, diaphragm, small intestine, large intestine, stomach. On a green base. Height: 84 cm, width: 104 cm (= length of the model), depth: 33 cm, weight: 16.6 kg



Zo 28 partly disassembled



Zo 28



Zo 28 Individual parts (without front leg and thoracic and abdominal wall)

ZoS 42/43 disassembled

ZoS 42/43 · Right Forefoot of the Horse with Ligamentous Apparatus, Vessels, and Nerves

Natural size, in **SOMSO-PLAST®. Separates into 7 parts.** Removable on a stand with green base. Height 29 cm, width 18 cm, depth 26 cm, weight 1.5 kg

ZoS 42/43

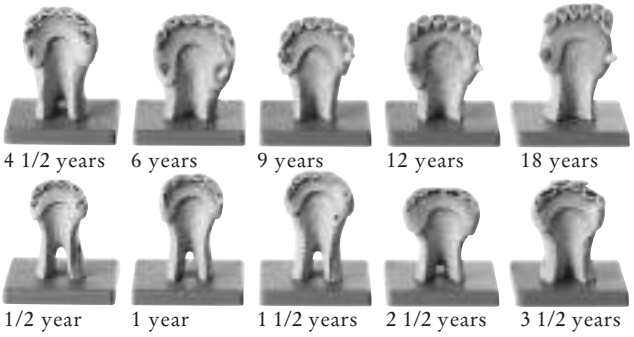
Model ZoS 42/43 Right Forefoot of the Horse with Ligamentous Apparatus, Vessels, and Nerves has been developed in co-operation with Prof. Dr. Helmut Waibl and Dr. Elisabeth Engelke of the Institute of Anatomy at the University of Veterinary Medicine Hanover.

Vertebrates

Horse, Equus ferus caballus

Nature is our Model SOMSO® Modelle

Zoology 1



4 1/2 years · 6 years · 9 years · 12 years · 18 years

1/2 year · 1 year · 1 1/2 years · 2 1/2 years · 3 1/2 years

Zo 33 · Sets of Teeth of a Horse

Natural size, modelled from the natural lower jaw showing 10 different stages of growth: at 1/2, 1, 1 1/2, 2 1/2, 3 1/2, 4 1/2, 6, 9, 12, and 18 years of age. Individually mounted on green bases. **In one piece.** Measurements of one model: Height: 13 cm, width: 12 cm, depth: 12 cm, weight of the series 2 kg

Zo 33

Zo 41 disassembled

Zo 41 · Knee Joint of the Horse

Natural size. With ligaments. **Separates into 2 parts.** On a green base. Height: 42 cm, width: 18 cm, depth: 24 cm, weight: 1.1 kg

Zo 36 disassembled

Zo 36 · Stomach of the Horse

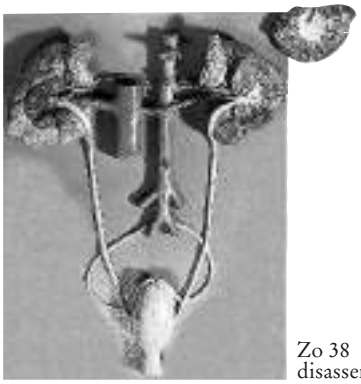
Natural size, separates into 2 halves. Removable from a green board. Height: 21 cm, width: 45 cm, depth: 37 cm, weight: 3.5 kg

Zo 39

Zo 39 disassembled

Zo 39 · Genital Organs of a Stallion

Natural size. Median section. **Separates into 4 parts.** Removable from a green base. Height: 38 cm, width: 55 cm, depth: 22 cm, weight: 3.9 kg



Zo 38 disassembled

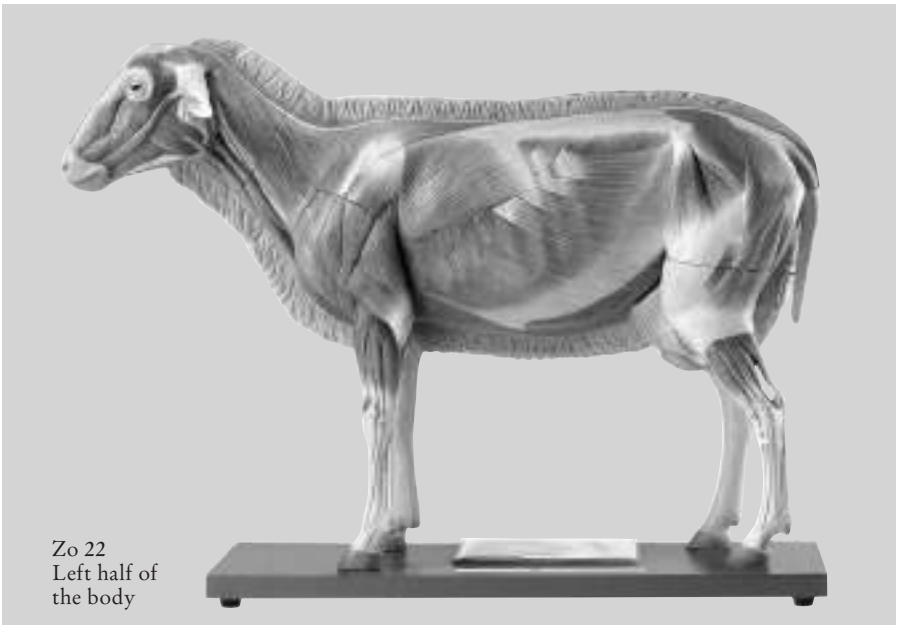
Zo 38 · Urinary Tract of a Male Horse

Natural size. Kidney comprises 2 parts. Mounted on a green board. Height: 59 cm, width: 44 cm, depth: 9 cm, weight: 3.4 kg

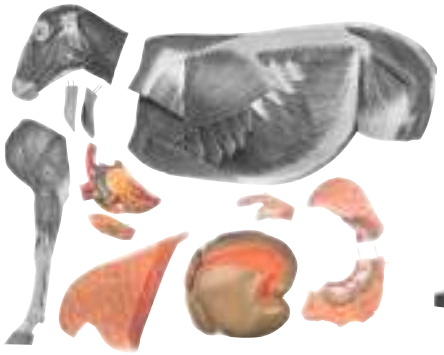
Zo 40

Zo 40 · Genital Organs of a Mare

Modelled from a natural specimen, **natural size.** Vagina and horn of uterus open. **In one piece.** Mounted on a green board. Height: 68 cm, width: 45 cm, depth: 8 cm, weight: 4.25 kg



Zo 22
Left half of the body

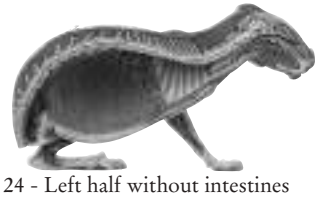


Zo 22 disassembled (the viscera are in SOMSO-PLAST®)

Zo 22 Skin side

Zo 22 · Sheep

Approximately 2/3 natural size. One side shows the skin, the other the muscular system. The left half of the head, the right and left ear, and the left foreleg are removable. After removing the abdominal wall, the topography of the thoracic and abdominal organs are displayed. Separates into: left half of lungs, heart (2 parts), stomach, small instestine (2 parts), and uterus. **Comprises 13 parts.** On a green base. Height: 49 cm, width: 70 cm, (= length of the model), depth: 20 cm, weight: 17 kg



Zo 24 - Left half without intestines

Removable ear and intestines

Zo 24 - Right half with intestines

Zo 24 - Muscle side

Zo 24 · Domestic Rabbit

Natural size, after a white buck rabbit which had won many prizes. **Separates into two halves medially.** The right side shows the pelt, the left half the muscular system and the topography of the thoracic and abdominal intestines which are removable. **Separates into 8 parts.** On a green base. Height: 30 cm, width: 52 cm (= length of the model), depth: 20 cm, weight: 5.6 kg

Zo 24 - Pelt side

ZoS 26

ZoS 26 · Domestic Hen

Natural size, in **SOMSO-PLAST®.** Modelled from a natural skeleton. The right side shows the plumage; the left side the organs. The torso can be easily removed from the plumage to show the muscular system. The following internal organs are removable: left lung, part of the liver, stomach. **Comprises 5 parts**. On a green base. Height: 49 cm, width: 43 cm, depth: 26 cm, weight: 2.55 kg

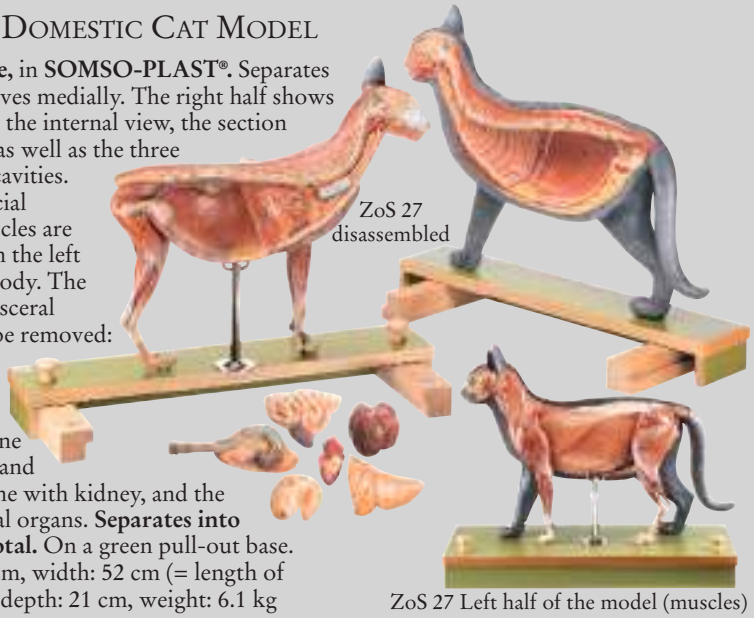
Topography of the muscles

ZoS 26 individual parts

ZoS 26 Plumage

ZoS 27 · Domestic Cat Model

Natural size, in **SOMSO-PLAST®.** Separates into two halves medially. The right half shows the skin and the internal view, the section of the head as well as the three large body cavities. The superficial skeletal muscles are displayed on the left half of the body. The following visceral organs can be removed: right lung, heart, liver, stomach, small intestine with spleen and large intestine with kidney, and the female sexual organs. **Separates into 8 parts in total.** On a green pull-out base. Height: 43 cm, width: 52 cm (= length of the model), depth: 21 cm, weight: 6.1 kg



ZoS 27 Left half of the model (muscles)

Prof. Dr. Helmut Waibl and Dr. Elisabeth Engelke during the appraisal, together with modellers Viola Speer and Carola Behrens.

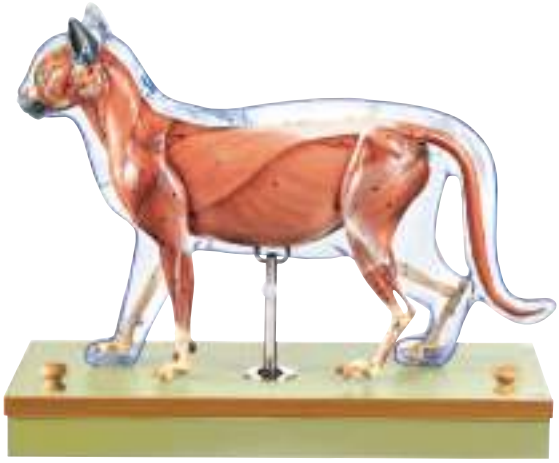
Vertebrates
Domestic Cat, Felis silvestris catus
Domestic Dog, Canis lupus familiaris

Zoology 1

ZoS 27/1 - Right half of the model (skeletal system)

Models ZoS 27, ZoS 27/1, and ZoS 109/1 developed in co-operation with Prof. Dr. Helmut Waibl and Dr. Elisabeth Engelke of the Institute of Anatomy at the University of Veterinary Medicine, Hanover.

The visceral organs of ZoS 27/1 can be disassembled, see fig. ZoS 27



ZoS 27/1 - Left half of the model (muscles)

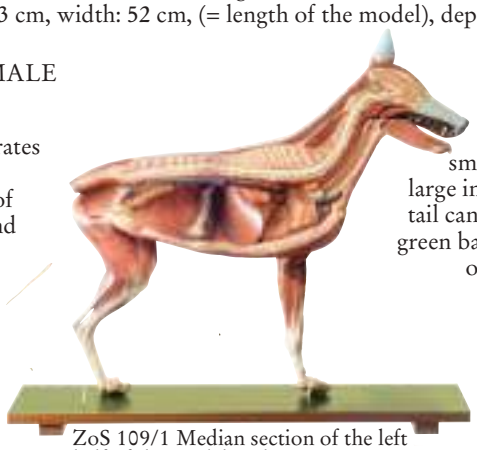
ZoS 27/1 · Domestic Cat Model

Natural size, in **SOMSO-PLAST®.** Separates into two halves medially. The right half shows the skeletal system in a transparent skin cover. The superficial skeletal muscles are displayed on the left half of the body and the median section shows the internal view of the body. The following visceral organs can be disassembled as follows: right lung, heart, liver, stomach, small intestine with spleen, large intestine with kidney, and the female sexual organs. The tail can also be removed. **Separates into 9 parts** in total, on a green pull-out base. Height: 43 cm, width: 52 cm, (= length of the model), depth: 21 cm, weight: 5.3 kg

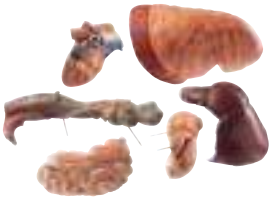
ZoS 109/1 · Model of a Female German Shepherd Dog

2/3 natural size, in **special plastic.** Separates into two halves medially. The right side shows the skeletal system. The left half of the model shows the skeletal muscles and the median section with a internal view of the body. The following visceral organs can be disassembled: right lung, heart, stomach, liver with right kidney, small intestine with duodenum and pancreas, large intestine with the female sexual organs. The tail can be removed. **Separates into 9 parts.** On a green base. Height: 62 cm, width: 74 cm. (= length of the model), depth: 25 cm, weight: 6.5 kg

ZoS 109/1 Left half of the model (muscles)



ZoS 109/1 Median section of the left half of the model without intestines



ZoS 109/1 intestines

ZoS 109/1 Right half of the model (skeletal system)

Detail of the head scales

ZoS 115 · Anatomy of the Head of a Snake

Common viper, Vipera b. berus (Linné). **Scale: 15:1,** in **SOMSO-PLAST®.** After Christian Groß, Director of Studies. The model shows the general features of the head of a snake, the venom apparatus, and the distinguishing characteristics of the adder. **Cannot be disassembled,** removable on a stand with green base. Height: 31 cm, width: 50 cm, depth: 14.5 cm, weight: 1.7 kg

ZoS 100

Liver

Gastrointestinal tract

Opened abdominal cavity

Note ZoS 100 and ZoS 100/1:
In the past also called "water frog" - harmonisation of common names

ZoS 100/1 · Edible Frog

Pelophylax kl. esculentus (synonym: Rana kl. esculenta). After Christian Groß, Director of Studies. **Scale: 4:1,** in **SOMSO-PLAST®.** The model shows a male Edible Frog with sprayed-out legs and inflated vocal sacs. The dorsal view shows the characteristics of form, colour and marking. Liver and gastrointestinal tract can be removed. The hind legs can be removed at the thighs. The urinary and genital organs of a female edible frog are shown on a supplementary model for comparison. **Separates into 5 parts.** On a stand with green base. Height: 56 cm, width: 46 cm, depth: 28 cm, weight: 5.05 kg

ZoS 100 · Edible Frog

Pelophylax kl. esculentus (synonym: Rana kl. esculenta). After Christian Groß, Director of Studies. **Scale: 4:1,** in **SOMSO-PLAST®. Separates into 3 parts.** On a green board. Height: 38 cm, width: 61 cm, depth: 13 cm, weight: 4.6 kg

ZoS 105

ZoS 105 · Model of the Anatomy of a Bony Fish

The model is that of a male mirror carp - Cyprinus carpio. In **SOMSO-PLAST®,** in **natural size.** Intestines, air-bladder, and testicles removable. **Separates into 4 parts.** On a stand with green base. Height: 35 cm, width: 48.5 cm, depth: 15 cm, weight: 1.7 kg

Disassembled visceral organs

ZoS 105 Skin side

ZoS 100/1 ventral side

ZoS 100/1 dorsal side

ZoS 100/1 disassembled

Invertebrates -

selection of representatives of the following simplified animal phylum classification, in descending level of order:

Echinoderms
Molluscs
Arthropods
Worms
Coelenterates
Protozoans

ZoS 117
Detail

ZoS 117

ZoS 117 disassembled

ZoS 117 · Roman Snail

Helix pomatia. **Scale: 6:1,** in **SOMSO-PLAST®.** After Christian Groß, Director of Studies. From the right, you have a full view of the shell. Viewed from the left, the snail is opened. The portion of the intestinal canal between the retropharynx and the small intestine can be removed, fully revealing the hermaphroditic genital system. **Separates into 4 parts.** On a green base. Height: 28 cm, width: 70 cm, depth: 38 cm, weight: 7.5 kg

ZoS 114

ZoS 114 · Common Starfish

Asterias rubens. **Scale approximately 3:1,** in **SOMSO-PLAST®.** After Christian Groß, Director of Studies. **3 parts in total.** Removable on a stand with green base. Height: 33 cm, width: 50 cm, depth: 35 cm, weight: 3.1 kg

Arm in cross section

ZoS 119
disassembled

ZoS 119

ZoS 119 · Swan Mussel

Anodonta cygnea, anatomical overview, right half of shell, of the pallium, and the gill removed, foot opened at the right side. **Scale: 4:1,** in **SOMSO-PLAST®.** After Christian Groß, Director of Studies. On a green base, removable. **Separates into 7 parts.** Height: 35 cm, width: 61 cm, depth: 38 cm, weight: 8.5 kg

Detail of the adhesive pads and claws

Detail of the capitulum from underneath

ZoS 122 · Tick

Castor bean Tick, lxodes ricinus, female. **Scale: 70:1.** Developed in co-operation with Christian Groß, Director of Studies, in **SOMSO-PLAST®.** **Cannot be disassembled.** Under transparent cover on removable green base. Height: 14 cm, width: 26 cm, depth: 28 cm, weight: 1.5 kg

ventral side

ZoS 121

ZoS 121 disassembled

ZoS 121 · Model of a Water Flea

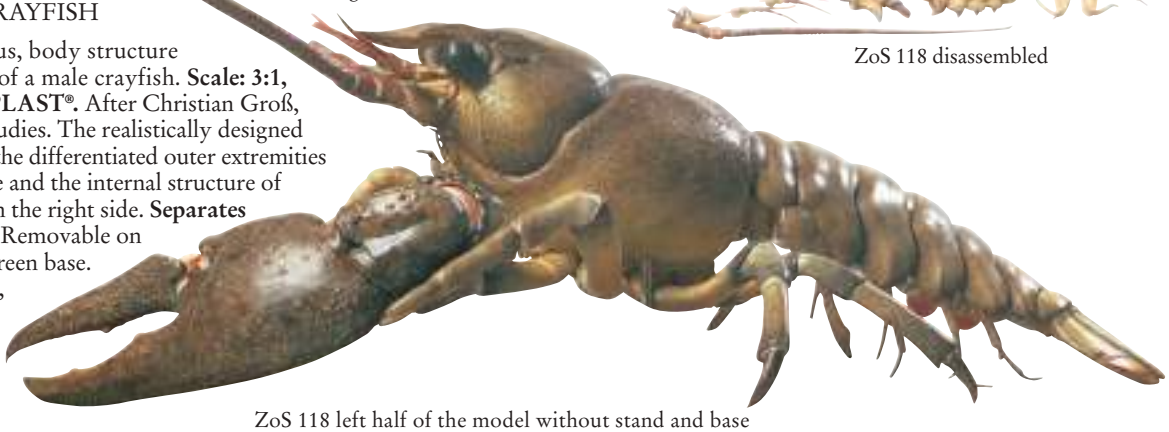
Daphnia pulex. In **SOMSO-PLAST®.** Female with summer eggs. After Christian Groß, Director of Studies. **Enlarged approximately 200:1.** The 35 cm tall, transparent model shows, apart from typical characteristics such as rowing-antennae, Right half of the shell and turgor extremities, many structural details. From the right side it separates into: right shell half with second antenna, part of the right half of the body with the five turgor-legs as well as the median-sectioned front third of the digestive tract; median-sectioned rear two thirds at the back of the digestive tract, right ovary, and two embryos. **Separates into 6 parts.** On a stand and green base. Height: 60 cm, width: 42.5 cm, depth: 39 cm, weight: 2.5 kg

ZoS 118 right half of the model

ZoS 118 disassembled

ZoS 118 · European Crayfish or Noble Crayfish

Astacus astacus, body structure and anatomy of a male crayfish. **Scale: 3:1,** in **SOMSO-PLAST®.** After Christian Groß, Director of Studies. The realistically designed model shows the differentiated outer extremities on the left side and the internal structure of the crayfish on the right side. **Separates into 14 parts.** Removable on a stand with green base. Height: 31 cm, width: 75 cm, depth: 30 cm, weight: 5.1 kg



ZoS 118 left half of the model without stand and base

ZoS 47/5

ZoS 47/5 · Bark Beetle

Scale: 40:1, in **SOMSO-PLAST®.** Appraised by Christian Groß, Director of Studies. Enlarged and true-to-detail representation of the typographer beetle (Ips typographus – eight-toothed spruce bark beetle). On a stand with green base. **Cannot be disassembled.** Height: 17 cm, width: 32 cm, depth: 19 cm, weight: 900 g

ZoS 47/6

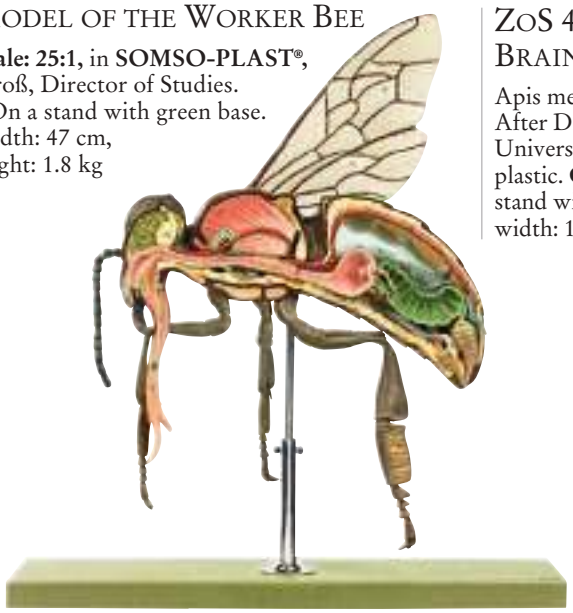
ZoS 47/6 · Bark Beetle - Development

Same version as ZoS 47/5, but with the following stages of development: egg, 2 x young larvae, fully-grown larva, pupa, and beetle. The models are displayed in a relief that is modelled on the feeding pattern. Additionally, the feeding pattern is displayed as a natural cast. **Separates into 5 parts.** On a brown base. Height: 20 cm, width: 40 cm, depth: 28 cm, weight: 1.6 kg

ZoS 47/1 · Model of the Worker Bee

Apis mellifica. **Scale: 25:1,** in **SOMSO-PLAST®,** after Christian Groß, Director of Studies. **3 parts in total.** On a stand with green base. Height: 50 cm, width: 47 cm, depth: 15 cm, weight: 1.8 kg

ZoS 48/1



ZoS 47/1

ZoS 47/4 · Model of the Brain of a Honey Bee

Apis mellifica, **Scale: 50:1.** After Dr. Dorothea Brückner, University of Bremen. Made from special plastic. **Cannot be disassembled.** On a stand with green base. Height: 23 cm, width: 18 cm, depth: 18 cm, weight: 830 g

ZoS 47/4

ZoS 49

ZoS 49 · Ommateum or Compound Eye

Enlarged approximately 200 times, in **SOMSO-PLAST®.** Showing the histological fine structure. **Cannot be disassembled.** On a stand with green base. Height: 33 cm, width: 29 cm, depth: 18 cm, weight: 1.15 kg

ZoS 48/1 · Head of a Bee

Apis mellifica. **Scale: 50:1.** After Dr. E. Schicha, in **SOMSO-PLAST®. Separates into 2 parts.** On a stand with green base. Height: 35 cm., width: 18 cm., depth: 19 cm., weight: 1.1 kg.

ZoS 49/31

ZoS 49/31 · Common Housefly

Musca domestica. **Scale: 30:1.** After Dr. E. Schicha, in **SOMSO-PLAST®. Separates into 3 parts.** On a stand with green base. Height: 25 cm, width: 28 cm, depth: 21 cm, weight: 750 g

ZoS 48/4

ZoS 48/4 · Head of a Fly

Musca domestica. **Scale: 50:1,** after Dr. E. Schicha, in **SOMSO-PLAST®. Cannot be disassembled.** On a stand with green base. Height: 29 cm, width: 18 cm, depth: 21 cm, weight: 900 g

ZoS 47/2

ZoS 47/2 · Model of the Hind Legs of a Bee

Functional model, after Dr. E. Schicha. **Enlarged many times,** in **SOMSO-PLAST®.** The model is particularly well suited to illustrate the following functions: brushing off the bee's body with the combs, collecting the pollen in the corbicula on the outside of the tibia, movable joint between tibia and planta. **Cannot be disassembled.** On a stand with green base. Height: 42 cm, width: 18 cm, depth: 18 cm, weight: 650 g

ZoS 48 · Head of Carabus

Golden Ground Beetle, Carabus auratus, **Scale: 50:1,** in **SOMSO-PLAST®.** After Christian Groß, Director of Studies. Lower jaw, lower lip, and both antennae are removable for demonstration purposes. Simplified facet structure. **Separates into 6 parts.** On a stand with green base. Height: 40 cm (with antennae), width: 70 cm, depth: 60 cm, weight: 3.2 kg

ZoS 48

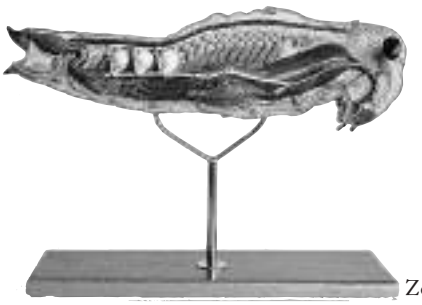
ZoS 48/6 · Model of the Head of a Cockroach

Periplaneta americana. After Dr. E. Schicha. Modelled from nature. **Scale: 50:1,** in **SOMSO-PLAST®.** Upper jaw and maxillae are movable and mounted to demonstrate the function. **Separates into 3 parts.** On a stand with green base. Height: 43 cm, width: 29 cm, depth: 18 cm, weight: 1.2 kg

ZoS 48/6

Zo 104 · Model of the Egyptian Migratory Locust, Female

Anacridium aegyptium. After natural preparations, **enlarged approximately 10 times**. After Christian Groß, Director of Studies. **In one piece.** On a stand with green base. Height: 30 cm, width: 48 cm, depth: 15 cm, weight: 1.5 kg



Zo 104

ZoS 49/3

ZoS 49/3 · Springtail

Sminthurus viridis (Collembola). **Scale: 90:1,** in **SOMSO-PLAST®. In one piece.** After Dr. E. Schicha. **Modelled from nature.** The mechanism of the furcula can be demonstrated. On a stand with green base. Height: 27 cm, width: 18 cm, depth: 26 cm, weight: 820 g

ZoS 49/20

ZoS 49/27

ZoS 49/14 · Termite

Coptotermes acinaciformis. A soldier termite or "white ant". **Scale: 50:1,** in **SOMSO-PLAST®.** After Dr. E. Schicha. **In one piece.** On a stand with green base. Height: 22 cm, width: 24 cm, depth: 18 cm, weight: 750 g

ZoS 49/20 · Head Louse

Pediculus humanus, var. capitis, in **SOMSO-PLAST®.** After Dr. E. Schicha. **Scale: 70:1. In one piece.** On a stand with green base. Height: 18 cm, width: 21 cm, depth: 18 cm, weight: 650 g

ZoS 49/22 · Aphid

Macrosiphum rosae. A wingless rose aphid, after Dr. E. Schicha, in **SOMSO-PLAST®. Scale: 80:1. In one piece.** On a stand with green base. Height: 32 cm, width: 24 cm, depth: 23 cm, weight: 720 g

ZoS 49/22

ZoS 49/14

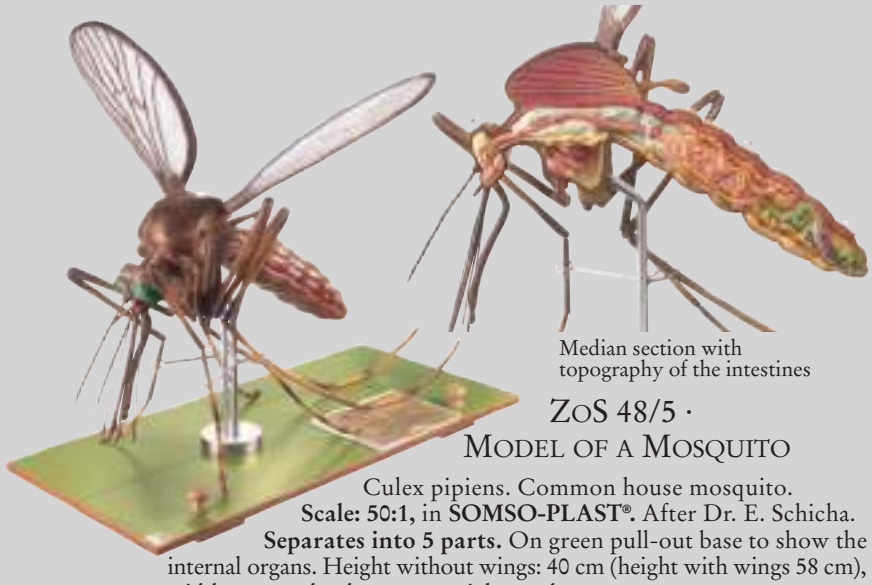
ZoS 49/32

ZoS 49/27 · Ant

Formica polyctena. A red forest ant, after Dr. E. Schicha, in **SOMSO-PLAST®. Scale: 30:1. In one piece.** On a stand with green base. Height: 20 cm, width: 19 cm, depth: 19 cm, weight: 700 g

ZoS 49/32 · Cat Flea

Ctenocephalides felis. In **SOMSO-PLAST®.** After Dr. E. Schicha. **Scale: 70:1. In one piece.** On a stand with green base. Height: 29 cm, width: 18 cm, depth: 14 cm, weight: 700 g



Median section with topography of the intestines

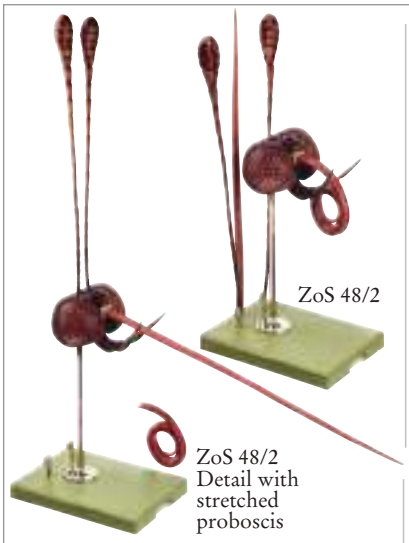
ZoS 48/5 · Model of a Mosquito

Culex pipiens. Common house mosquito. **Scale: 50:1,** in **SOMSO-PLAST®.** After Dr. E. Schicha. **Separates into 5 parts.** On green pull-out base to show the internal organs. Height without wings: 40 cm (height with wings 58 cm), width: 65 cm, depth: 32 cm, weight: 5.8 kg

Invertebrates - Arthropods
Insects
Worms

Nature is our Model SOMSO® Modelle

Zoology 2

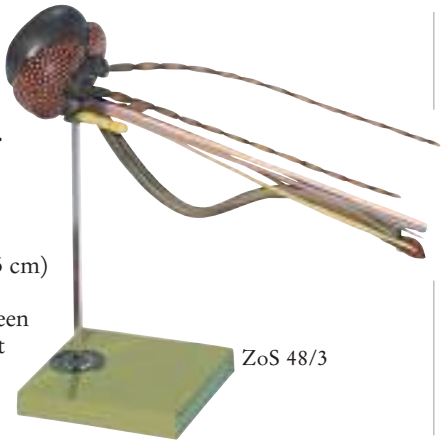


ZoS 48/2

ZoS 48/2 Detail with stretched proboscis

ZoS 48/2 · Head of a Butterfly

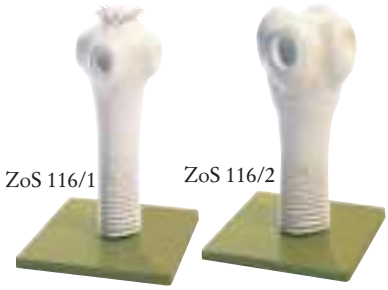
Pieris brassicae, **Scale: 50:1.** modelled from nature. After Dr. E. Schicha. In **SOMSO-PLAST®.** The proboscis is shown stretched out (Length: 54.5 cm) and coiled. **Separates into 5 parts.** On a stand with green base. Height: 58 cm (height with antennae 83 cm), width: 18 cm, depth: 26 cm, weight: 1.25 kg



ZoS 48/3

ZoS 48/3 · Head of a Mosquito

Culex pipiens. Head of a female mosquito. **Scale: 80:1.** After Dr. E. Schicha, in **SOMSO-PLAST®. Cannot be disassembled.** On a stand with green base. Height: 37 cm, width: 18 cm, depth: 46 cm, weight: 900 g



ZoS 116/1

ZoS 116/2

ZoS 116/1 · Head of the Pork Tapeworm or Armed Tapeworm

Taenia solium, **enlarged many times,** in **SOMSO-PLAST®.** After Christian Groß, Director of Studies. **In one piece.** On a green base. Height: 29 cm, width: 18 cm, depth: 18 cm, weight: 800 g

ZoS 116/2 · Head of the Beef Tapeworm or Unarmed Tapeworm

Taenia saginata, **enlarged many times,** in **SOMSO-PLAST®.** After Christian Groß, Director of Studies. **In one piece.** On a green base. Height: 28 cm, width: 18 cm, depth: 18 cm, weight: 900 g

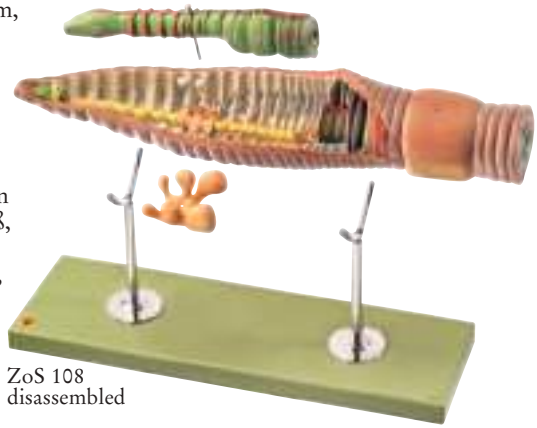
ZoS 116/3

The models of the tapeworm are also available as a series under order no. ZoS 116/1-3

ZoS 116/3 · Model Board of the Tapeworms

Comparison of the pork tapeworm (Taenia solium) and the beef tapeworm (Taenia saginata), **enlarged many times over,** in **SOMSO-PLAST®.** After Christian Groß, Director of Studies. The model illustrates: egg, cysticercus, some final segments in natural size and enlarged segments in varying degrees of maturation. **Cannot be disassembled,** on a green board. Height: 46 cm, width: 49 cm, depth: 9 cm, weight: 3.3 kg

ZoS 108 (without stand and base)



ZoS 108 disassembled

ZoS 108 · Common Earthworm

Lumbricus terrestris. **Scale: 25:1,** in **SOMSO-PLAST®.** After Christian Groß, Director of Studies. **Separates into 3 parts.** Removable on a stand with green base. Height: 26 cm, width: 54 cm, depth: 15 cm, weight: 2.4 kg

ZoS 57 · DIVISION OF THE CELL

Enlarged many times, in **SOMSO-PLAST®.** Shown by **8 models:** Prophase, metaphase, anaphase, and telophase. These models show the process of indirect division (mitosis) in the living cell, seen photomicroscopically. Individually mounted on stands, with green bases. Weight of the series: 2.7 kg

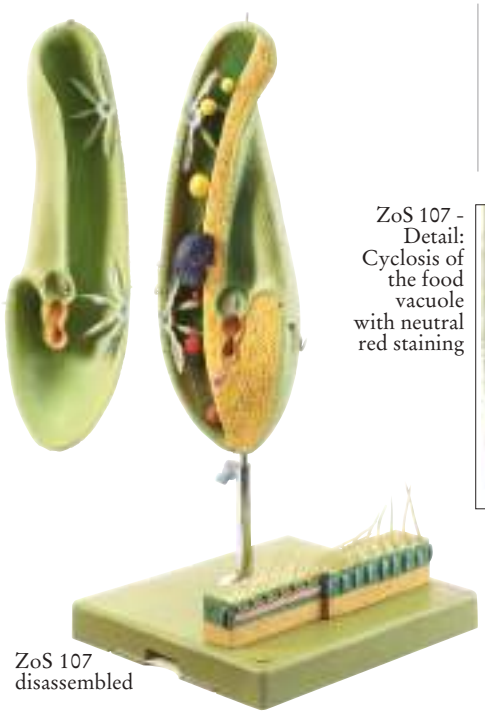
ZoS 101/1 · PLANKTONIC FORAMINIFERA

Globorotalia menardii. Original size 0.5 mm in diameter, **enlarged approximately 200 times,** in **SOMSO-PLAST®.** Developed in co-operation with Dr. Barbara Donner, research centre "Ocean Margins" at the University of Bremen. Weight: 104 g

ZoS 101 disassembled

ZoS 101 · AMOEBA

Amoeba proteus. **Scale: 1,000:1,** after Prof. Dr. M. Lindauer and Christian Groß, Director of Studies. In **SOMSO-PLAST®.** Removable on a green base. **Separates into 2 parts.** The small pseudopodium can be opened up showing the structure after electron microscope magnification. Height: 8.5 cm, width: 39 cm, depth: 28 cm, weight: 1.45 kg



ZoS 107 disassembled

ZoS 107 - Detail: Cyclosis of the food vacuole with neutral red staining

ZoS 107 · PARAMECIUM

Paramecium. **Scale: 1,600:1,** in **SOMSO-PLAST®.** After Christian Groß, Director of Studies. The model shows the cell of a protozoa: macro- and micronucleus, contractile vacuoles, cytostome with membranellae, myonemes and food vacuoles and the formation of the endo- and ectoplasm and the networkof neuronemes. A detailed block shows the structure of the pellicle of the ectoplasm and the position and order of the trichocysts and a range of cilia in typical order. **Separates into 2 parts.** On a stand with green base. Height: 55 cm, width: 28 cm, depth: 25 cm, weight: 2.9 kg

ZoS 106

ZoS 106 Detail: male germ cell

ZoS 106 · FRESH-WATER POLYP

Hydra, **enlarged approximately 30 times,** in **SOMSO-PLAST®.** After Christian Groß, Director of Studies. The anatomy of the hydra is shown in longitudinal section: entoderm, mesoglea, ectoderm, male and female gametes, buds and mouth opening. A detailed block of the wall of the body in the region of stomach and intestine, **enlarged approximately 200 times,** clearly shows the microscopic structure in cross and longitudinal section, and especially the structure of the various types of cell (cnidoblasts, muscle cells, phagocytes, adenocytes, replacement cells, and the nerve network). **In one piece.** On a green base. Height: 42 cm, width: 41 cm, depth: 26 cm, weight: 2 kg

ZoS 57/4 · Chromosome Model

Scale: 50,000:1, in **SOMSO-PLAST®.** Developed in co-operation with Christian Groß, Director of Studies. **Cannot be disassembled,** on a stand with green base. Height: 47 cm, width: 18 cm, depth: 18 cm, weight: 1.1 kg

ZoS 57/4

ZoS 110/1 · Animal Cell

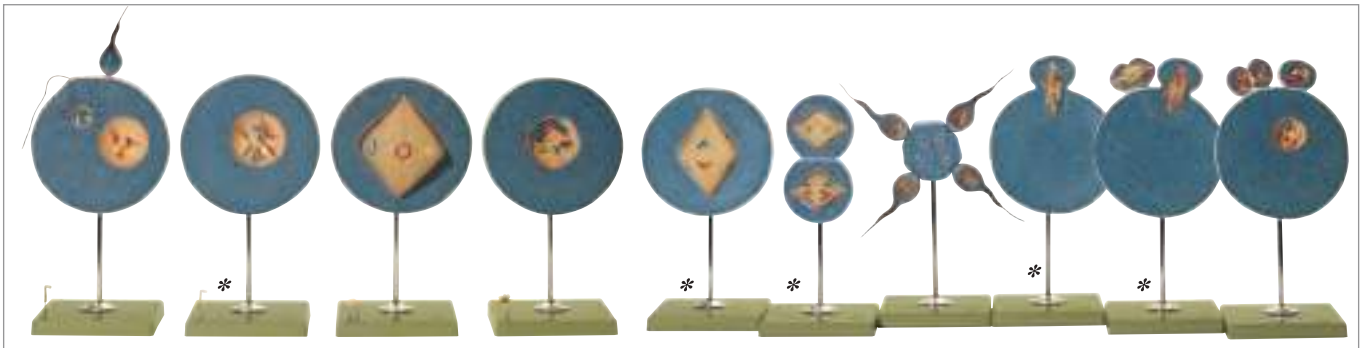
Scale: 10,000:1, in **SOMSO-PLAST®.** After Christian Groß, Director of Studies. **Cannot be disassembled,** on a stand with green base. Height of the model: 22 cm, total height: 37 cm, width: 18 cm, depth: 18 cm, weight: 1 kg

ZoS 110/1

Animal Cell Genetics Development of Animals

Nature is our Model SOMSO® Modelle

Zoology 3



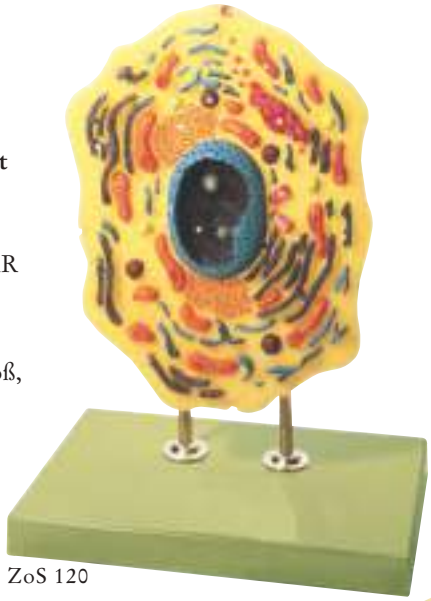
ZoS 57/2 (The stages marked with * make up model series ZoS 57/3)

ZoS 57/2 · Meiosis

As a component of reduction divisions, shown by **8 models with 2 explanatory introductory models, enlarged many times,** in **SOMSO-PLAST®.** After Christian Groß, Director of Studies. **Cannot be disassembled.** Individually mounted on a stand with green base. Weight: 4.3 kg

ZoS 57/3 · Change of Nuclear Phases in the Maturation of Sperm and Ovum (Meiosis)

Enlarged many times. After Christian Groß, Director of Studies, in **SOMSO-PLAST®.** Chromosomes of paternal and maternal origin as well as gonosomes (can be exchanged in diploid phase) are shown in different colours. **The series consists of 5 individual models.** Each model is mounted on a stand with green base. Weight: 2.45 kg



ZoS 120

ZoS 120 · Animal Cell

Scale: 2,000:1, in **SOMSO-PLAST®.** After Christian Groß, Director of Studies. The model shows the fine structure of an animal cell. Area of application: Extended cell examination. **Cannot be disassembled,** on a stand with green base. Height: 52 cm, width: 39 cm, depth: 26 cm, weight: 3.9 kg

ZoS 57/1 · Mitosis

After Christian Groß, Director of Studies. **Enlarged many times,** in **SOMSO-PLAST®. The series consists of 8 individual models.** Each model is mounted on a stand with green base. **Cannot be disassembled.** Weight: 8.28 kg

ZoS 57/1

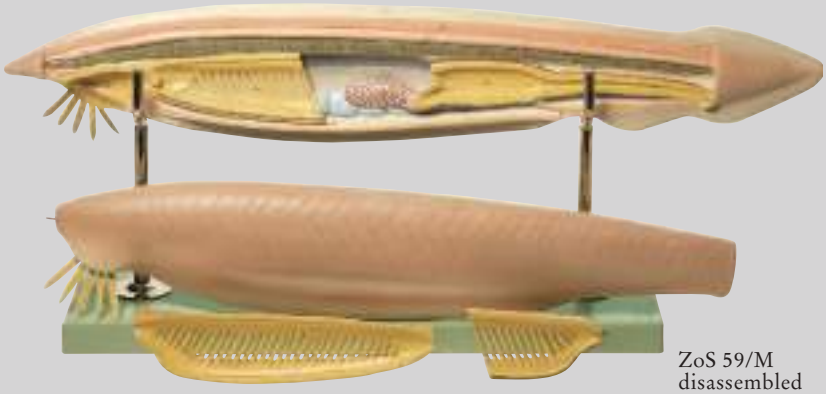
ZoS 60 · Complete Collection of Lancelets

Branchiostoma lanceolatum, consisting of ZoS 58 (A - J) and ZoS 59 (K - N). **13 models in total,** in **SOMSO-PLAST®**. Weight: 6.1 kg

Animal Cell Genetics Development of Animals

Nature is our Model SOMSO® Modelle

Zoology 3



ZoS 59/M disassembled

ZoS 59/M · Lancelet

Branchiostoma lanceolatum. **Scale approximately 150:1,** in **SOMSO-PLAST®.** The **four-part** model shows the structure of the body of a fully-grown specimen: fin edges, muscle segments, position of the gonads, the nervous system, the chorda, intestine, and vascular system. Removable on a stand with green base. Height: 25 cm, width: 68 cm, depth: 15 cm, weight: 2.8 kg

ZoS 58

ZoS 59/K

ZoS 59/N

ZoS 59/L

ZoS 57/10

ZoS 58 · Equal Cleavage and Gastrulation in the Lancelet

Branchiostoma lanceolatum. **Scale approximately 500:1,** in **SOMSO-PLAST®. Represented on 9 models** on stand with green base, showing the different stages of cleavage, formation of blastula and primitive gut. **Cannot be disassembled.** Weight: 3.2 kg

ZoS 59/K · Longitudinal Section of the Larva of the Lancelet at the Beginning of Development

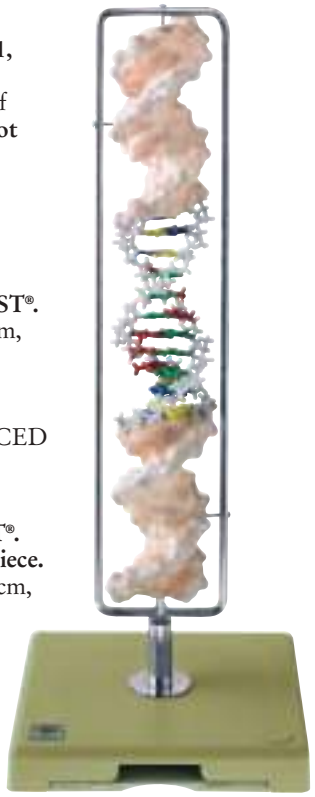
Enlarged approximately 150 times, in **SOMSO-PLAST®. In one piece.** On a stand with green base. Height: 23 cm, width: 20 cm, depth: 14 cm, weight: 300 g

ZoS 59/L · Longitudinal Section of the Larva of the Lancelet in advanced Development

Older larva of the lancelet with nine original segments, **enlarged approximately 150 times,** in **SOMSO-PLAST®.** The left external membrane has been removed. **In one piece.** On a stand with green base. Height: 23 cm, width: 24.5 cm, depth: 16 cm, weight: 620 g

ZoS 59/N · Lancelet Cross Section through the Branchia and middle Intestine Regions

Enlarged approximately 150 times, in **SOMSO-PLAST®. In one piece.** On a stand with green base. Height: 22 cm, width: 14 cm, depth: 16 cm, weight: 500 g



ZoS 57/20

ZoS 57/20 · DNA Double Helix (Type B-DNA)

Scale: 30 x 10^6 : 1, in **SOMSO-PLAST®.** Developed in co-operation with Prof. Dr. H. P. Jennissen, Dr. M. Laub, and Prof. Dr. G. Witt. **In one piece,** can be rotated on a green base. Based on data gained from X-ray structure analysis, the model shows a section of a DNA double helix. It complies essentially with the model of the DNA structure postulated by Watson and Crick in 1953. Height: 47.5 cm, width: 18 cm, depth: 18 cm, weight: 1 kg

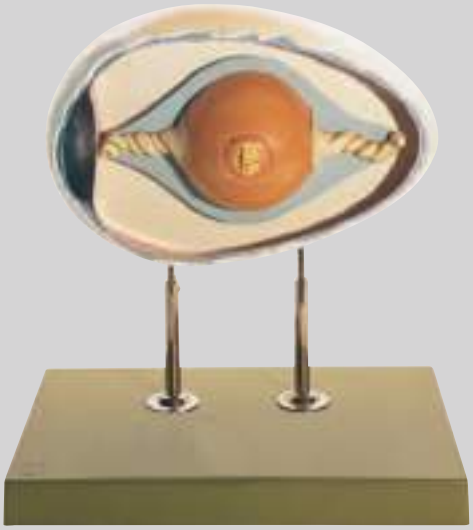
ZoS 57/10 · Protein Model (human bone morphogenetic protein BMP-2)

Scale: 20 x 10^6 : 1, in **SOMSO-PLAST®.** Developed in co-operation with Prof. Dr. H.P. Jennissen, Dr. M. Laub, and Prof. Dr. G. Witt. **Cannot be disassembled.** Under transparent cover on a green base. Height: 10 cm, depth: 18 cm, width: 18 cm, weight: 400 g

ZoS 57/10-E · Protein Model (human bone morphogenetic protein BMP-2, without ill.)

Scale: 11 x 10^6 : 1, in **SOMSO-PLAST®.** Developed in co-operation with Prof. Dr. H.P. Jennissen, Dr. M. Laub, and Prof. Dr. G. Witt. **In one piece.** With green base. Height: 6 cm, depth: 12 cm, width: 12 cm, weight: 130 g

Advance notice: ZoS 57/30 · t-RNA Model
Developed in co-operation with Prof. Dr. H.P. Jennissen, Dr. M. Laub and Prof. Dr. G. Witt. **In one piece,** with green base.


ZoS 103

ZoS 103 - ZoS 103/5 · Series of Models Showing the Embryonic Development of the Domestic Hen

Description as per ZoS 103 to ZoS 103/5. Series of **6 models,** in **SOMSO-PLAST®,** After Prof. Dr. M. Lindauer and Christian Groß, Director of Studies. Weight of the series: 9.9 kg

ZoS 103 · Reproduction of a Chicken Egg

The model shows an unincubated, fertilised chickens egg. **Linearly enlarged 6,5 times.** In **SOMSO-PLAST®,** after Christian Groß, Director of Studies. **Cannot be disassembled,** on a stand with green base. Height: 41 cm, width: 39 cm, depth: 26 cm, weight: 3.6 kg

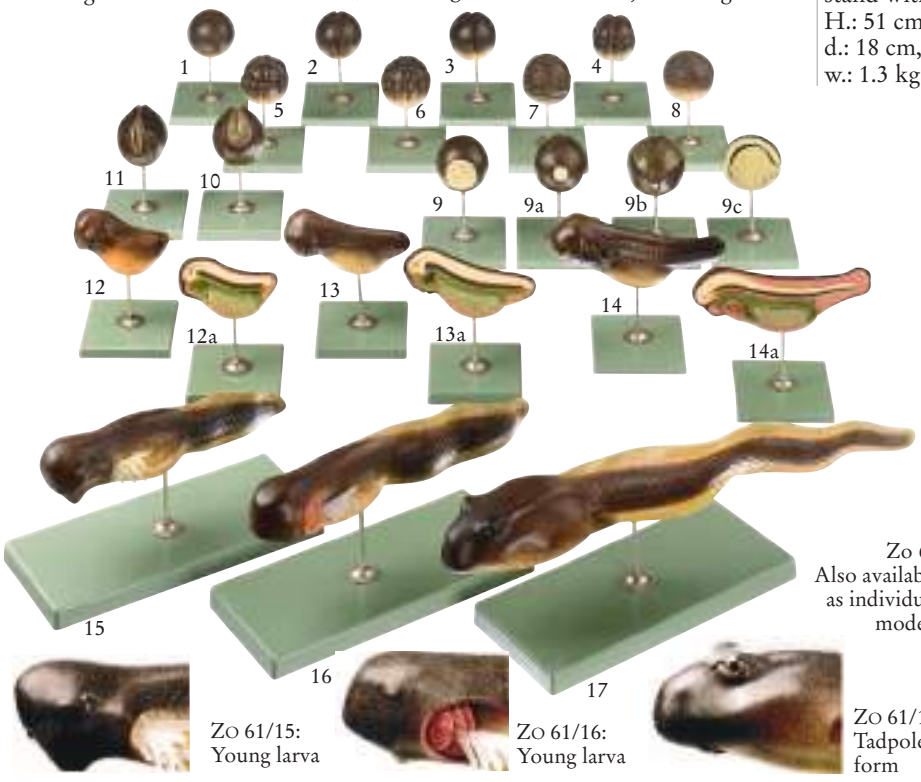

ZoS 103/1 Blastodisc of a Fertilised but non-incubated Chicken Egg Cannot be disassembled, on a stand with green base. H.: 41 cm, w.: 28 cm, d.: 18 cm, w.: 1.4 kg


ZoS 103/2 Chicken Embryo after approximately 20-25 hours of incubation Separates into 4 parts, on a stand with green base. H.: 41 cm, w.: 28 cm, d.: 18 cm, w.: 1.3 kg


ZoS 103/3 Chicken Embryo after approximately 33 hours of incubation Separates into 2 parts, on a stand with green base. H.: 40 cm, w.: 29 cm, d.: 18 cm, w.: 1.4 kg


ZoS 103/4 Chicken Embryo after approximately 50 hours of incubation Cannot be disassembled, on a stand with green base. H.: 51 cm, w.: 18 cm, d.: 18 cm, w.: 1.3 kg


ZoS 103/5 Chicken Embryo after approximately 4 days of incubation Cannot be disassembled, on a stand with green base. H.: 45 cm, w.: 26 cm, d.: 18 cm, w.: 1.75 kg



Zo 61
Also available as individual models

Zo 61/15: Young larva

Zo 61/16: Young larva

Zo 61/17: Tadpole form

Zo 61 · Models Showing the Development of the Frog

Consisting of **23 individual models** showing the development of a fertilised frog's egg to a tadpole. A new production of Ziegler models after Prof. Ecker. **Enlarged approximately 50 times.** Diameter of a natural egg approximately 1.5 mm

A. Stages of cleavage (Models 1 - 8)
B. Stages of gastrulation (Models 9 - 9c),
C. Organogenesis - formation of the neural tube (Models 10 - 11)
D. Development of the tadpole (Models 12 - 14a)
E. Swimming tadpoles (Models 15 - 17)

Each model individually mounted on a stand with green base and **in one piece.** Weight of the series: 10 kg

Producing original SOMSO®-Models requires a great deal of specialised and entirely manual work. Craftsmanship perfects every model.

Comparative Anatomy

Nature is our Model SOMSO® Modelle

Zoology 4

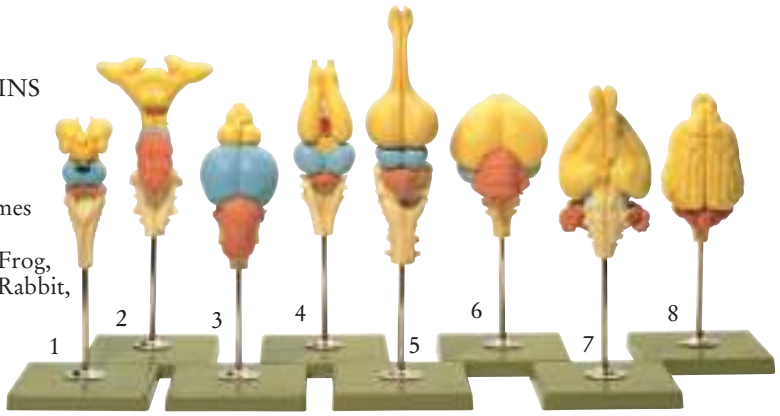







ZoS 55 · Models of Vertebrate Brains

In **SOMSO-PLAST®.** The series consists of the following **8 models** (some enlarged many times over): 1. River lamprey, 2. Dog fish, 3. Trout, 4. Frog, 5. Alligator, 6. Dove, 7. Rabbit, 8. Dog. **Cannot be disassembled.** Each model on an individual stand with green base. Weight: 2.2 kg



ZoS 55

ZoS 55/9

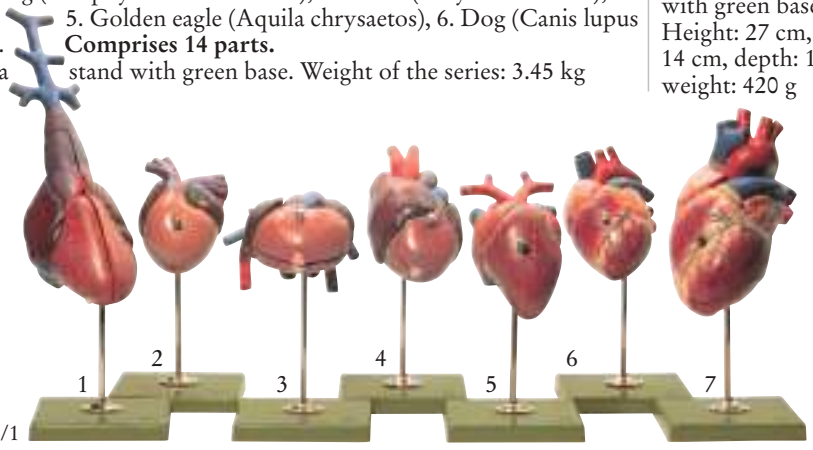
ZoS 55/9 · Model of Rat Brain

Enlarged approximately 4.25 times, in **SOMSO-PLAST®.** On a stand with green base. Height: 27 cm, width: 14 cm, depth: 16 cm, weight: 420 g

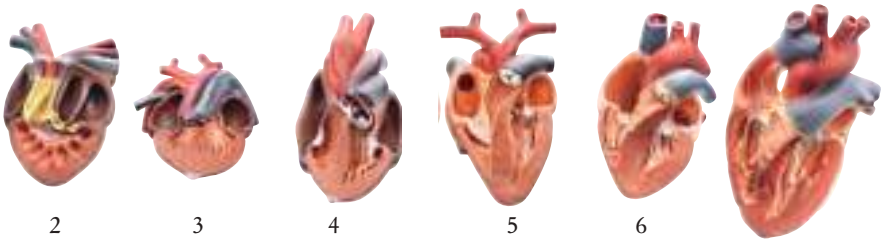
ZoS 54/1 · Models of Vertebrate Hearts

Can be disassembled, in **SOMSO-PLAST®.** The internal structure is shown in all its detail. The direction of the blood flow is marked. **7 models, natural size and partly enlarged.** 1. Teleost fish (Pike, Esox lucius), 2. Frog (Pelophylax kl. esculentus), 3. Turtle (Emys orbicularis), 4. Crocodile (Crocodylus niloticus), 5. Golden eagle (Aquila chrysaetos), 6. Dog (Canis lupus familiaris), 7. Human (Homo sapiens). **Comprises 14 parts.** Each model individually mounted on a stand with green base. Weight of the series: 3.45 kg

ZoS 54/1-1 disassembled



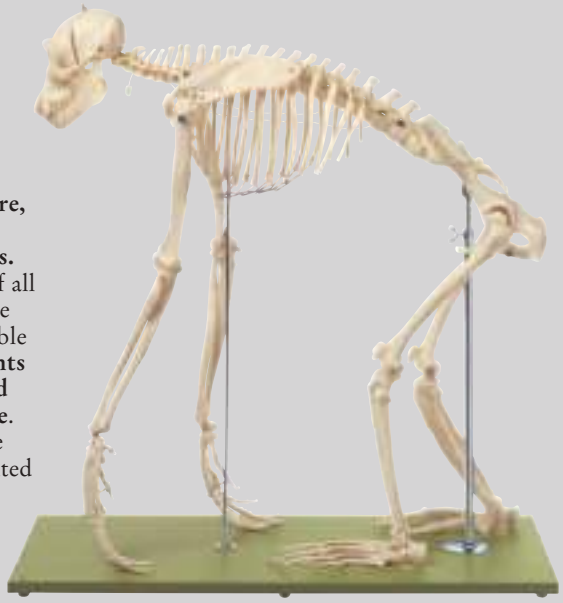
ZoS 54/1

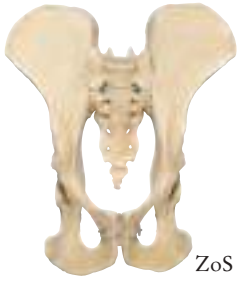


Internal view of models ZoS 54/1 numbers 2 – 7

ZoS 53/110 · Skeleton of a Chimpanzee

Pan troglodytes (Blumenbach 1799), male, **modelled according to nature,** in **SOMSO-PLAST®. Age: approximately 12 years.** True-to-life representation of all anatomical details of the bone structure. Skull with removable calvarium and mandible. **Joints flexibly mounted, upper and lower extremities removable.** The right and left foot can be detached from the leg. Mounted upright on a green stand. Height: 88 cm, width: 82 cm, depth: 40 cm, weight: 10.8 kg





ZoS 53/116

ZoS 53/122

ZoS 53/116 · Pelvis of a Chimpanzee

Pan troglodytes (Blumenbach 1799), male, **modelled according to nature,** in **SOMSO-PLAST®,** weight: 650 g

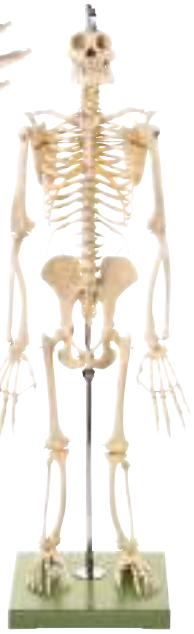
ZoS 53/122 · Foot Skeleton of a Chimpanzee

Pan troglodytes (Blumenbach 1799), male, **modelled according to nature,** in **SOMSO-PLAST®,** weight: 120 g

ZoS 53/131

ZoS 53/131 · Hand Skeleton of a Chimpanzee

Pan troglodytes (Blumenbach 1799), male, **modelled according to nature,** in **SOMSO-PLAST®,** weight: 180 g



ZoS 53/110-4 · Skeleton of a Chimpanzee

Same version as ZoS 53/110, but standing upright, mounted on a stand with green base. **Modelled according to nature,** in **SOMSO-PLAST®,** Height: 144 cm, width: 38 cm, depth: 38 cm, weight: 9.5 kg

ZoS 53/110-4

ZoS 53/401

ZoS 53/401 · Unmounted Skeleton of a Chimpanzee

Pan troglodytes (Blumenbach 1799), male, **modelled according to nature,** in **SOMSO-PLAST®.** With the exception of the skull (with removable calvarium and mandible), and one hand and one foot, all the bones are unmounted. Supplied in plastic bags in a carton. Height: 22 cm, width: 51 cm, depth: 28 cm, weight: 5.3 kg

ZoS 53/142

ZoS 53/142 · Collection of Typical Chimpanzee Bones

Pan troglodytes (Blumenbach 1799), male, **modelled according to nature,** in **SOMSO-PLAST®.** Consisting of skull (3 parts), scapula, clavicle, humerus, radius, ulna, carpal bones, bones of the index finger, 3 each right and left ribs, one each cervical, thoracic, and lumbar vertebrae, hip bone, sacrum, coccyx, femur, tibia, fibula, tarsal bones, and bones of the big toe. Supplied in plastic bags in a carton. Height: 20 cm, width: 43 cm, depth: 24 cm, weight: 2.9 kg

Comparative Anatomy

Nature is our Model SOMSO® Modelle

Zoology 4

The series of skulls of great apes ZoS 50 - ZoS 53/7 and the Skeleton of a Chimpanzee ZoS 53/110 is based on a co-operation with The Bavarian State Collection of Zoology in Munich.

♂ ZoS 52

♂ ZoS 50

ZoS 50 · Gorilla Skull

Gorilla g. gorilla (Savage and Wyman 1847), male. **Natural size,** in **SOMSO-PLAST®.** Mandible movable and can be removed. Weight: 1.1 kg

♂ ZoS 50/1

ZoS 50/1 · Young Gorilla Skull

Gorilla g. gorilla (Savage and Wyman 1847), male (1 1/2 years old). **Natural size,** in **SOMSO-PLAST®.** Mandible movable and can be removed. Weight: 280 g

♀ ZoS 51

ZoS 51 · Gorilla Skull

Gorilla g. gorilla (Savage and Wyman 1847), female. **Natural size,** in **SOMSO-PLAST®.** Mandible movable, and can be removed. Weight: 880 g

♀ ZoS 52/1

ZoS 52/1 · Orang Utan Skull

Pongo pygmaeus abelii (Clark 1826), female. **Natural size,** in **SOMSO-PLAST®.** Mandible movable and can be removed. Weight: 390 g

♂ ZoS 52

ZoS 52 · Orang Utan Skull

Pongo pygmaeus (Hoppins 1763), male, **Natural size,** in **SOMSO-PLAST®.** Mandible movable and can be removed. Weight: 600 g

ZoS 52/2

ZoS 52/2 · Skull of Young Orang Utan

Pongo Pygmaeus. **Natural size,** in **SOMSO-PLAST®.** Mandible movable and can be removed. Weight: 250 g

Artisan craftsmanship perfects every SOMSO® Model

Comparative Anatomy

Nature is our Model SOMSO® Modelle

Zoology 4

♂ ZoS 53

ZoS 53/1

♀ ZoS 53/2

ZoS 53 · Chimpanzee Skull

Pan troglodytes (Blumenbach 1799), male. **Natural size,** in **SOMSO-PLAST®.** Mandible movable and can be removed. Weight 450 g

♂ ZoS 53/107

♂ ZoS 53/107 disassembled

ZoS 53/2 · Chimpanzee Skull

Pan troglodytes (Blumenbach 1799), female. **Natural size,** in **SOMSO-PLAST®.** Mandible movable and can be removed. Weight: 530 g

ZoS 53/107 · Chimpanzee Skull

Pan troglodytes (Blumenbach 1799), male. **Natural size,** in **SOMSO-PLAST®.** Cranium can be removed, mandible movable and can be removed. Weight 600 g

ZoS 53/1 · Chimpanzee Skull, juvenile

Pan troglodytes (Blumenbach 1799). **Natural size,** in **SOMSO-PLAST®.** Mandible movable and can be removed. Weight: 160 g

♂ ZoS 53/3

ZoS 53/3 · Baboon Skull

Papio anubis (Blumenbach 1799), male. **Natural size,** in **SOMSO-PLAST®.** Mandible movable and can be removed. Weight: 460 g

ZoS 53/5 · Tupaia-Skull

Tupaia glis (Diard, 1820), male. **Natural size**, in **SOMSO-PLAST®.** Mandible movable and can be removed. On a stand with green base under a transparent dust cover. Height: 8 cm, length: 12 cm, depth: 12 cm, Weight: 115 g

Illustration showing the actual size of 5cm

ZoS 53/4

ZoS 53/4 · Rhesus Monkey Skull

Macaca mulatto, male. **Natural size**, in **SOMSO-PLAST®.** Mandible movable and can be removed. Weight: 160 g

ZoS 53/6

ZoS 53/6 · Howling Monkey Skull

Alouatta belzebul (Linnaeus, 1766) male. **Natural size**, in **SOMSO-PLAST®.** Mandible movable and can be removed. Weight: 100 g

ZoS 53/7

ZoS 53/7 · Gibbon Skull

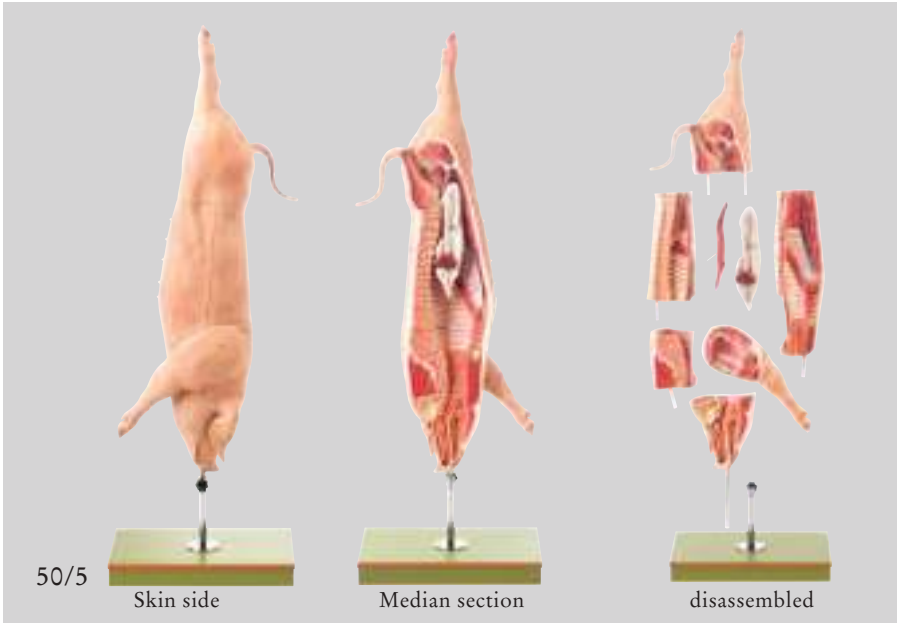
Hylobates syndactylus (Raffles, 1821), male. **Natural size**, in **SOMSO-PLAST®.** Mandible movable and can be removed. Weight: 140 g

ZoS 53/20

ZoS 53/20
frontal

ZoS 53/20 · Beaver Skull

Castor fiber (Linnaeus, 1758). **Natural size**, in **SOMSO-PLAST®.** Mandible movable and can be removed. Weight: 300 g



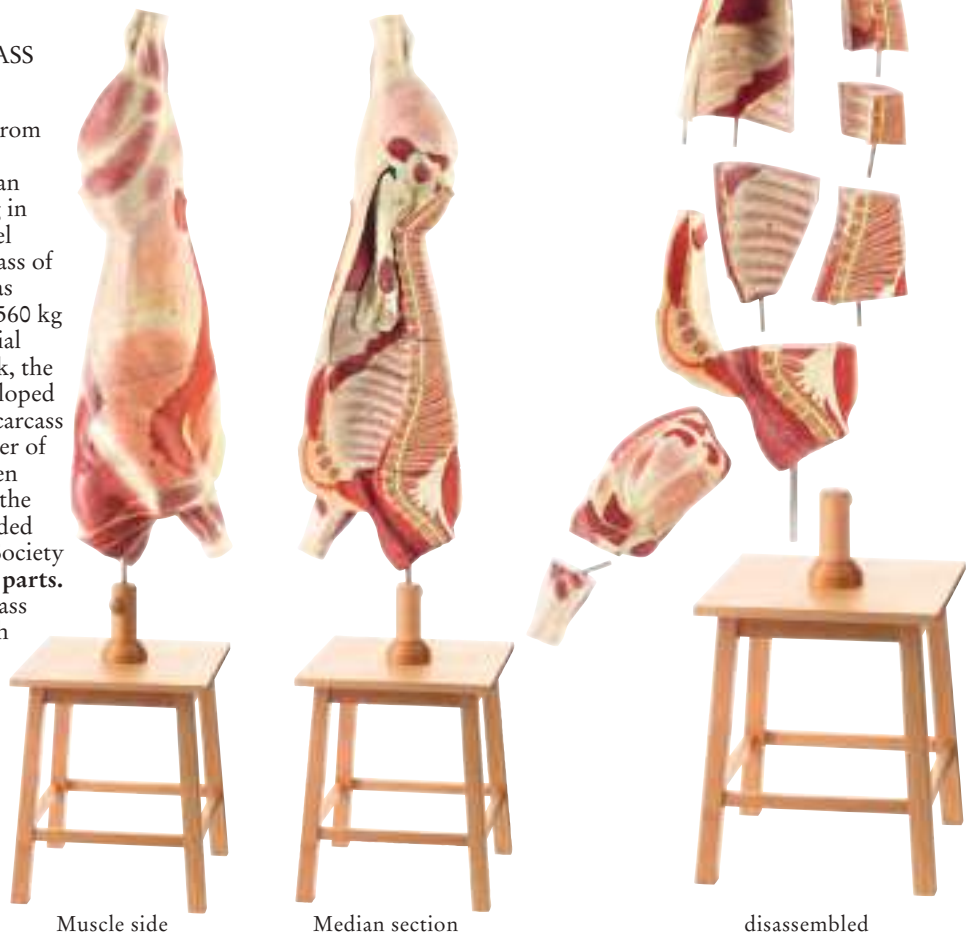
50/5 Skin side | Median section | disassembled

50/5 · MODEL OF THE CARCASS OF A PIG

2/3 of its natural size, made from **special plastic.** Developed in collaboration with the Bavarian Institute for Animal Breeding in Grub near Munich. The model shows the carcass of a porker that was slaughtered when it weighed 100 kg. Special features are the length of the body, the ample amount of meat and the low fat content. The model fundamentally complies with the method generally recommended by the German Agricultural Society (DLG) - "simplified DLG method of cutting". For that reason, it is of relevance for all areas of the Federal Republic of Germany and spans the methods of cutting up slaughter pigs used in different parts of the country, which are not always uniform. In total, the model **separates into 8 parts.** The essential parts of the carcass (ham with shank and foot, pork flare fat, fillet, loin with back fat, shoulder with shank and foot, belly with dewlap, neck with neck bacon, and head) can be demonstrated individually. Lines are drawn on to indicate further partitioning. On a stand with green base. Height: 119 cm, width: 38 cm, depth: 38 cm, weight: 10.24 kg

50/6 · MODEL OF THE CARCASS OF A YOUNG BULL

1/2 of its natural size, made from **special plastic.** Developed in collaboration with the Bavarian Institute for Animal Breeding in Grub near Munich. The model shows the left half of the carcass of a young fattening bull that was slaughtered when it weighed 560 kg and was 15 months old. Special features are the full thick flank, the broad back and the well-developed muscles in the shoulder. The carcass is evenly covered in a thin layer of surface fat. The model has been modelled in compliance with the method of cutting recommended by the German Agricultural Society (DLG) and **separates into 12 parts.** The essential parts of the carcass (suet and pelvic cavity fat with kidney, fillet, shank, haunch, roast beef, fore rib, hind quarter flank (front and rear part), chuck & blade, thin rib, brisket,shoulder, shin, and neck) can be demonstrated individually. On stand with base. Height: 190 cm, width: 45 cm, depth: 43 cm, weight: 18.4 kg



50/6 Muscle side | Median section | disassembled

The pathological models of the anatomy of domestic animals Zo 84 to Zo 89 provide targeted information by using natural casts for the identification of disease patterns and symptoms.

Professional Training Models

Nature is our Model SOMSO® Modelle

Zoology 5

Zo 89

Zo 89 · Glanders in a Horse

Natural size. Median section through the nose and throat cavities, larynx showing the form of the disease. Mounted on a green board. **In one piece.** Height: 40 cm, width: 70 cm, depth: 8 cm, weight: 3.7 kg

The extensive SOMSO® Series of Figurines of Thoroughbred Animals illustrates the different breed standards in great detail and accuracy. The models are made mainly from plaster and supplied on a base. The special catalogue SOMSO® Figurines of Thoroughbred Animals is available on request.

Zo 62/I-6 · Thoroughbred Stallion "Dark Ronald"

Zo 84

Zo 84 · Cow's Mouth with Mouth Disease

Natural cast. Mounted on a green board. **In one piece.** Height: 20 cm, width: 31 cm, depth: 26 cm, weight: 1.1 kg

Zo 85

Zo 85 · Cow´s Hoof with Foot Disease

Natural cast. On a green base. **In one piece.** Height: 24 cm, width: 18 cm, depth: 18 cm, weight: 700 g

Zo 62/I-17

Zo 62/I-17 · O Bajar

Original Arabian thoroughbred mare from the Hungarian Royal Stud of Bábolna, modelled from the live animal by Max Landsberg, Berlin 1901

Zo 87

Zo 86 · Cow´s Tongue with Mouth Disease

Natural cast. Mounted on a green board. **In one piece.** Height: 12 cm, width: 48 cm, depth: 14 cm, weight: 700 g

Zo 87 · Pig's Snout with Mouth Disease

Natural cast. Mounted on a green board. **In one piece.** Height: 16 cm, width: 25 cm, depth: 18 cm, weight: 1 kg

Zo 66/III-12

Zo 66/III-12 · Bavarian Breeding Pig

Modelled by Max Landsberg, Berlin

Zo 88

Zo 88 · Pig's Hoof with Foot Disease

Natural cast. Mounted on a green board. **In one piece.** Height: 18 cm, width: 12 cm, depth: 12 cm, weight: 400 g

Zo 74/VIII-52

Zo 74/VIII-52 · Herkules, Dutch Bull

From the herd of the owner of Benefeldt Manor in Quoossen near Galingen, East Prussia. Modelled from the live animal by Max Landsberg. Berlin 1896

Zo 86

The models from the series "Realistic Animal Models" are impressive due to their natural shapes and structural detail as well as the nuances of their natural colouring.

Realistic, Life-Size Animal Models

Nature is our Model SOMSO® Modelle

Zoology 6

ZoS 1028
Green Lizard, male –
Illustration in natural size,
for description see page 164

Realistic, Life-Size Animal Models

Salamanders

Nature is our Model SOMSO® Modelle

Zoology 6

Christian Groß, Director of Studies

Amphibians And Reptiles Of Central Europe

This series of life-size, generic animal models made from SOMSO-PLAST® was first developed in co-operation with Christian Groß, Director of Studies, in 1981, and has been continuously expanded within the framework of his scientific advice since then.

Trinomial nomenclature has been used for the scientific names of the models. It provides information regarding the subspecies "form", which is typical or prevalent in Central Europe and which has been the template for the design of each respective model type.

All models are supplied with a transparent dust cover, with the description printed on the green base.

ZoS 1000 · Alpine Salamander, male

Salamandra a. atra
Total length: 14 cm,
H.: 9 cm, W.: 16 cm,
D.: 14 cm, Wt: 150 g

ZoS 1000/1 · Alpine Salamander, female

Salamandra a. atra
Total length: 15 cm,
H.: 9 cm, W.: 16 cm,
D.: 14 cm, Wt: 150 g

ZoS 1000/2 · Alpine Salamander, two juveniles

Salamandra a. atra
Total length: 5.3 cm,
H.: 6.5 cm, W.: 12 cm,
D.: 12 cm, Wt: 120 g

ZoS 1000/3 · Golden Alpine Salamander

Salamandra atra aurorae
Total length: 13.2 cm,
H.: 7.5 cm,
W.: 12 cm,
D.: 12 cm, Wt: 100 g

ZoS 1001/RV · Spotted Fire Salamander, male, red variant

Salamandra s. salamandra
Total length:
19.1 cm,
H.: 9 cm, W.: 16 cm,
D.: 14 cm, Wt: 330 g

Together with the Biological Model Makers Rudolf Galle and Manfred Eichler, Christian Groß, Director of Studies, compares a live specimen of the red variant of the fire salamander with the painted version of the SOMSO® model ZoS 1001/RV.

ZoS 1001 · Spotted Fire Salamander, male

Salamandra s. salamandra
Total length: 19.1 cm, H.: 9.5 cm, W.: 16 cm,
D.: 14 cm, Wt: 330 g

ZoS 1002 · Spotted Fire Salamander, female

Salamandra s. salamandra
Total length: 19 cm, H.: 9.5 cm, W.: 16 cm,
D.: 14 cm, Wt: 330 g

ZoS 1003 · Striped Fire Salamander, male

Salamandra s. terrestris
Total length: 19.1 cm, H.: 9.5 cm, W.: 16 cm,
D.: 14 cm, Wt: 300 g

ZoS 1003/1 · Striped Fire Salamander, female

Salamandra s. terrestris
Total length: 19 cm, H.: 9.5 cm,
W.: 16 cm, D.: 14 cm. Wt: 260 g

ZoS 1003/SV · Striped Fire Salamander, male, Solling population

Salamandra s. terrestris
Total length: 19.1 cm,
H.: 9.5 cm, W.: 16 cm,
D.: 14 cm, Wt: 300 g

ZoS 1004/3-1 Alpine Newt, male, and
ZoS 1004/3-2 Alpine Newt, female, both in their terrestrial form

ZoS 1004 Alpine Newt, Ichthyosaura a. alpestris, in its aquatic form and in its natural habitat

ZoS 1005 Palmate Newt, Lissotriton helveticus, in its aquatic form and in its natural habitat

Realistic, Life-Size Animal Models

Newts

Nature is our Model SOMSO® Modelle

Zoology 6

ZoS 1004/1

ZoS 1004/2

ZoS 1004/3-1

ZoS 1004/3-2

ZoS 1005/1

ZoS 1005/2

ZoS 1004

ZoS 1004/3

ZoS 1005

ZoS 1004 · Alpine Newt, male and female, in their aquatic form

Ichthyosaura a. alpestris
Total length: male: 8.9 cm, female: 9.5 cm, H.: 7.5 cm, W.: 12 cm, D.: 12 cm, Wt: 170 g

ZoS 1004/1 · Alpine Newt, male, in its aquatic form

Ichthyosaura a. alpestris
Total length: 8.9 cm, H.: 7.5 cm, W.: 12 cm, D.: 12 cm, Wt: 170 g

ZoS 1004/2 · Alpine Newt, female, in its aquatic form

Ichthyosaura a. alpestris
Total length: 9.5 cm, H.: 7.5 cm, W.: 12 cm, D.: 12 cm, Wt: 170 g

ZoS 1004/3 · Alpine Newt, male and female, in their terrestrial form

Ichthyosaura a. alpestris
Total length: male: 8.9 cm, female: 9.5 cm, H.: 7.5 cm, W.: 12 cm, D.: 12 cm, Wt: 170 g

ZoS 1004/3-1 · Alpine Newt, male, in its terrestrial form

Ichthyosaura a. alpestris
Total length: 8.9 cm, H.: 7.5 cm, W.: 12 cm, D.: 12 cm, Wt: 170 g

ZoS 1004/3-2 · Alpine Newt, female, in its terrestrial form

Ichthyosaura a. alpestris
Total length: 9.5 cm, H.: 7.5 cm, W.: 12 cm, D.: 12 cm, Wt: 170 g

ZoS 1005 · Palmate Newt, male and female, in their aquatic form

Lissotriton helveticus
Total length: male: 7.4 cm, female: 7.7 cm, H.: 7.5 cm, W.: 12 cm, D.: 12 cm, Wt: 160 g

ZoS 1005/1 · Palmate Newt, male, in its aquatic form

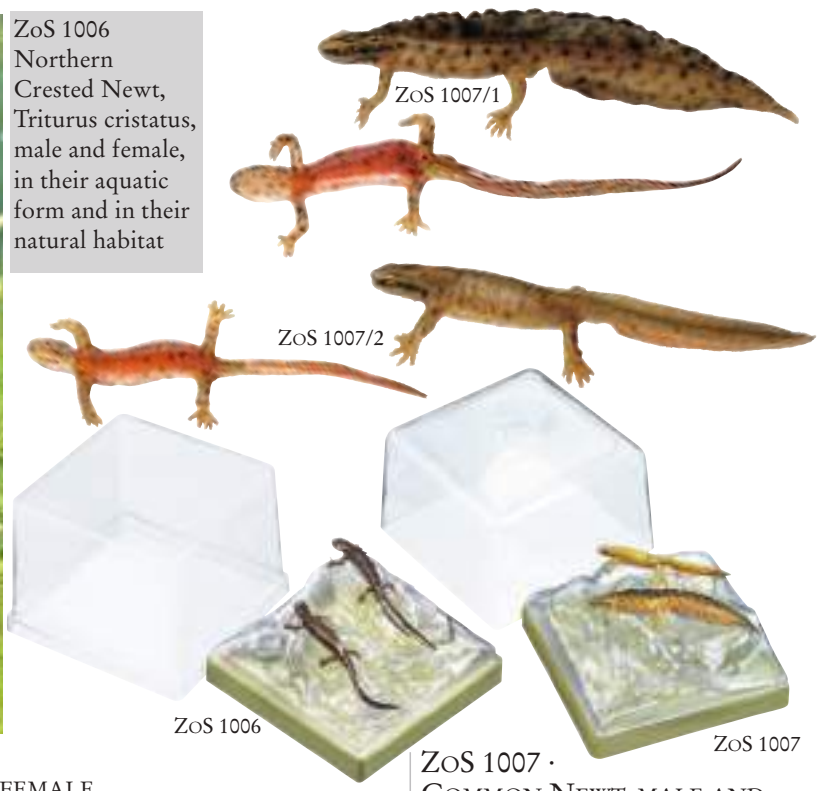
Lissotriton helveticus
Total length: 7.4 cm, H.: 7.5 cm, W.: 12 cm, D.: 12 cm, Wt: 160 g

ZoS 1005/2 · Palmate Newt, female, in its aquatic form

Lissotriton helveticus
Total length: 7.7 cm, H.: 7.5 cm, W.: 12 cm, D.: 12 cm, Wt: 160 g

ZoS 1007 Common Newt, Lissotriton v. vulgaris, male and female, in their aquatic form and in their natural habitat

ZoS 1006 Northern Crested Newt, Triturus cristatus, male and female, in their aquatic form and in their natural habitat



ZoS 1006 · Northern Crested Newt, male and female, in their aquatic form

Triturus cristatus
Total length: male: 14.8 cm, female: 14.3 cm. H.: 15 cm, W.: 18 cm, D.: 18 cm, Wt: 370 g

ZoS 1006/1 · Northern Crested Newt, male, in its aquatic form

Triturus cristatus
Total length: 14.8 cm, H.: 15 cm, W.: 18 cm, D.: 18 cm, Wt: 200 g

ZoS 1006/2 · Northern Crested Newt, female, in its aquatic form

Triturus cristatus
Total length: 14.3 cm, H.: 15 cm, W.: 18 cm, D.: 18 cm, Wt: 350 g

ZoS 1007 · Common Newt, male and female, in their aquatic form

Lissotriton v. vulgaris
Total length: male: 10.9 cm, female: 8.3 cm, H.: 8 cm, W.: 12 cm, D.: 12 cm, Wt: 200 g

ZoS 1007/1 · Common Newt, male, in its aquatic form

Lissotriton v. vulgaris
Total length: 10.9 cm, H.: 8 cm, W.: 12 cm, D.: 12 cm, Wt: 170 g

ZoS 1007/2 · Common Newt, female, in its aquatic form

Lissotriton v. vulgaris
Total length: 8.3 cm, H.: 8 cm, W.: 12 cm, D.: 12 cm, Wt: 170 g

ZoS 1015

ZoS 1015/1

ZoS 1015 · Green Toad, male

Bufotes v. viridis
(synonym: Bufo v. viridis)
Head-torso length: 6.8 cm, H.: 8 cm,
W.: 12 cm, D.: 12 cm, Wt: 180 g

ZoS 1015/1 · Green Toad, female

Bufotes v. viridis (synonym: Bufo v. viridis),
Head-torso length: 7.5 cm, H.: 7.5 cm,
W.: 12. cm, D.: 12 cm, Wt: 300 g

Realistic, Life-Size Animal Models

Midwife Toad, Yellow-bellied and Fire-bellied Toads, Common Spadefoot, True Toads

Nature is our Model SOMSO® Modelle

Zoology 6

ZoS 1008 · Midwife Toad with Spawn, male

Alytes o. obstetricans
Head-torso with spawn: 5.5 cm,
head-torso length: 4.2 cm, H.: 7.5 cm,
W.: 12 cm, D.:12 cm, Wt: 130 g

ZoS 1011 · Common Spadefoot

Pelobates f. fuscus
Head-torso length: 5.2 cm, H.: 6.5 cm,
W.: 12 cm, D.: 12 cm, Wt: 140 g

ZoS 1015/2 · Green Toad, female

Bufotes v. viridis
(synonym: Bufo v. viridis) -
Neusiedler-Lake-Population.
Head-torso length: 7.5 cm, H.: 7.5 cm,
W.: 12. cm, D.: 12 cm, Wt: 300 g

ZoS 1008/1 · Midwife Toad, female

Alytes o. obstetricans
Head-torso length: 4.2 cm, H.: 6 cm,
W.: 12 cm, D.: 12 cm, Wt: 120 g

ZoS 1014 · Natterjack Toad

Epidalea calamita
(synonym: Bufo calamita)
Head-torso length: 5.8 cm, H.: 7.5 cm,
W.: 12 cm, D.: 12 cm, Wt: 160 g

ZoS 1012 · Common Toad, male

Bufo b. bufo
Head-torso length: 7.0 cm, H.: 6.5 cm,
W.: 12 cm, D.:12 cm, Wt: 180 g

ZoS 1009 · Yellow-bellied Toad

Bombina v. variegata
Head-torso length:
4.5 cm, H.: 7.5 cm,
W.: 12 cm, D.: 12 cm,
Wt: 120 g

ventral side
ZoS 1009

ZoS 1013

ZoS 1013 · Common Toad, female

Bufo b. bufo
Head-torso length: 8.4 cm, H.: 9.5 cm,
W.: 16 cm, D.: 14 cm, Wt: 330 g

ventral side
ZoS 1010/1

ZoS 1010/1 · Fire-bellied Toad

Bombina bombina
Head-torso length: 4.6 cm, H.: 6 cm,
W.: 12 cm, D.: 12 cm, Wt: 140 g

ZoS 1013/2 · Common Toad, pair in amplexus

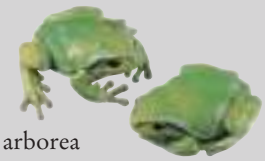
Bufo b. bufo
Head-torso length:
female 9.4 cm,
male 6.9 cm, H.: 9.5 cm,
W.: 16 cm,
D.: 14 cm,
Wt: 400 g

ZoS 1013/2

Realistic, Life-Size Animal Models

Common Tree Frogs
True Frogs - Brown Frogs, Green Frogs

ZoS 1016/1 · Common Tree Frog, (2 models) female, Hyla arborea
Head-torso length: normal posture 4.4 cm, at rest 4.3 cm, H.: 6 cm, W.: 12 cm, D.: 12 cm, Wt: 150 g



ZoS 1016/2 · Common Tree Frog, female, normal posture
Hyla arborea
Head-tors length: 4.4 cm, H.: 6 cm, W.: 12 cm, D.: 12 cm, Wt: 140 g

ZoS 1016/3 · Common Tree Frog, at rest
Hyla arborea
Head-torso length: 4.3 cm, H.: 6 cm, W.: 12 cm, D.: 12 cm, Wt: 140 g

ZoS 1016/4 · Common Tree Frog, female, normal posture, rare light blue morph
Hyla arborea
Head-torso length: 4.4 cm, H.: 6 cm, W.: 12 cm, D.: 12 cm, Wt: 140 g

ZoS 1023 · Edible Frog*, male
Pelophylax kl. esculentus
Head-torso length: 6.3 cm, H.: 6 cm, W.: 12 cm, D.: 12 cm, Wt: 160 g

ZoS 1024 · Edible Frog*, female
Pelophylax kl. esculentus
Head-torso length: 7.9 cm, H.: 6 cm, W.: 12 cm, D.: 12 cm, Wt: 200 g

* In the past also called "Common water frog" - harmonisation of common names

ZoS 1023/2 · Jumping Edible Frog*, male
Pelophylax kl. esculentus
Overall length, jumping: 16.5 cm, Head-torso length: 7.2 cm, H.: 10 cm, W.: 16 cm, D.: 14 cm, Wt: 310 g

ZoS 1017 · Common Frog, male
Rana t. temporaria
Head-torso length: 8.2 cm, H.: 6.5 cm, W.: 12 cm, D.: 12 cm, Wt: 180 g

ZoS 1017/CH · Common Frog, male, with dark pigmentation (typical for alpine populations)
Rana t. temporaria
Head-torso length: 8.2 cm, H.: 6.5 cm, W.: 12 cm, D.: 12 cm, Wt: 180 g

ZoS 1020 · Agile Frog
Rana dalmatina
Head-torso length: 5.2 cm, H.: 7.5 cm, W.: 12 cm, D.: 12 cm, Wt: 200 g

ZoS 1018 · Common Frog, female
Rana t. temporaria
Head-torso length: 8.0 cm, H.: 7.5 cm, W.: 12 cm, D.: 12 cm, Wt: 200 g

ZoS 1018/CH · Common Frog, female, with dark pigmentation (typical for alpine populations)
Rana t. temporaria
Head-torso length: 8.0 cm, H.: 6 cm, W.: 12 cm, D.: 12 cm, Wt: 200 g

ZoS 1022 · Marsh Frog
Pelophylax ridibundus
Head-torso length: 9.3 cm, H.: 8.5 cm, W.: 12 cm, D.: 12 cm, Wt: 250 g

ZoS 1019 · Moor Frog, male
Rana a. arvalis
Head-torso length: 5.8 cm, H.: 7.5 cm, W.: 12 cm, D.: 12 cm, Wt: 150 g

ZoS 1019/4 · Moor Frog – pair in amplexus, male in typical "mating blue"
Rana a. arvalis
Head-torso length: 7.9 cm, H.: 8 cm, W.: 12 cm, D.: 12 cm, Wt: 200 g

Realistic, Life-Size Animal Models

Green Frogs
Water frog complex
Water Frogs

Nature is our Model SOMSO® Modelle

Zoology 6

Water Frogs: Pool Frog (Pelophylax lessonae), Marsh Frog (Pelophylax ridibundus), and Edible Frog (Pelophylax kl. esculentus) - ZoS 1021* to ZoS 1024

There is a special genetic connection among the Central European water frogs - the "water frog complex". Unlike the true species Pool Frog and Marsh Frog, the Edible Frog originated from a cross breeding (hybridisation) of Pool Frog and Marsh Frog and is therefore a hybrid. Consequently, its scientific species name is occasionally put in inverted commas: Pelophylax "esculentus".

A special process of hybridogenesis facilitates the genesis of complex hybrid populations with a high percentage of triploid individuals capable of propagation, i.e. individuals with an additional - "stolen" (to steal in Greek is kleptein) - set of chromosomes. Therefore also Pelophylax kl. esculentus.

Model series ZoS 1021 - ZoS 1021/7 illustrates the great variety of colourations and markings of the Pool Frog. Together with the ability to "situationally" brighten or darken the green of the basic colouration, the result is numerous camouflage options for the frogs that are threatened by many predators. During the mating season, males are more or less yellow - sexual dimorphism. In specimens of the "striata" form, a dominant allele causes a bright green stripe along the middle of the back.

In this context, the prevalence of the latter within a population can be reflected upon, drawing on Mendel's Law of Dominance.

ZoS 1021 · Pool Frog*, male - with dorsal stripe

Pelophylax lessonae
Head-torso length: 5.7 cm, H.: 6.5 cm, W.: 12 cm, D.: 12 cm, Wt: 160 g

ZoS 1021/4 · Pool Frog*, male - mating colouration

Pelophylax lessonae
Head-torso length: 5.7 cm, H.: 6.5 cm, W.: 12 cm, D.: 12 cm, Wt: 160 g

ZoS 1021/1 · Pool Frog*, female - with dorsal stripe

Pelophylax lessonae
Head-torso length: 6.5 cm, H.: 6.5 cm, W.: 12 cm, D.: 12 cm, Wt: 175 g

ZoS 1021/5 · Pool Frog*, female - bluish morph

Pelophylax lessonae
Head-torso length: 6.5 cm, H.: 6.5 cm, W.: 12 cm, D.: 12 cm, Wt: 175 g

ZoS 1021/2 · Pool Frog*, male - without dorsal stripe

Pelophylax lessonae
Head-torso length: 5.7 cm, H.: 6.5 cm, W.: 12 cm, D.: 12 cm, Wt: 160 g

ZoS 1021/6 · Pool Frog*, male - brownish morph

Pelophylax lessonae
Head-torso length: 5.7 cm, H.: 6.5 cm, W.: 12 cm, D.: 12 cm, Wt: 160 g

ZoS 1021/3 · Pool Frog*, female - without dorsal stripe

Pelophylax lessonae
Head-torso length: 6.5 cm, H.: 6.5 cm, W.: 12 cm, D.: 12 cm, Wt: 175 g

ZoS 1021/7 · Pool Frog*, female - brownish morph

Pelophylax lessonae
Head-torso length: 6.5 cm, H.: 6.5 cm, W.: 12 cm, D.: 12 cm, Wt: 175 g

ZoS 1021, ZoS 1021/1, ZoS 1021/5, ZoS 1021/6, ZoS 1021/7 are representatives of the "striata" form * In the past also called "pool frog" - harmonisation of common names

Realistic, life-size Animal Models

Turtles
Lizards
Slow Worms

Nature is our Model SOMSO® Modelle

Zoology 6

ZoS 1025 ·
European Pond Turtle, male

With the markings on the carapace in more muted colours – typical for the indigenous residual populations in Central Europe
Emys o. orbicularis
Total length: 25.1 cm, height at the withers*: 13.4 cm, H.: 10 cm, W.: 18 cm, D.: 18 cm, Wt: 510 g
*Height at the withers: Length along the central line of the carapace

ZoS 1025/1 ·
Hermann's Tortoise, male

Testudo hermanni boettgeri, Total length: 29 cm,
height at the withers*: 17.8 cm, H.: 15 cm, W.: 26.5 cm, D.: 29 cm, Wt: 1.35 kg
*Height at the withers: Length along the central line of the carapace

ZoS 1026 ·
Slow Worm

Anguis f. fragilis
Total length: 31.5 cm, H.: 6 cm,
W.: 12 cm, D.: 12 cm, Wt: 140 g

ZoS 1026/2 · Slow Worm, female

Anguis f. fragilis, Total length: 38.2 cm, H.: 6.5 cm, W.: 32 cm, D.: 19 cm, Wt: 470 g

ZoS 1026/2-1 ·
Slow Worm, female, with blue spots, which are very rare for this sex

Anguis f. fragilis
Total length: 38.2 cm, H.: 6.5 cm,
W.: 32 cm, D.: 19 cm, Wt.: 470 g

ZoS 1027 ·
Common Wall Lizard, male

Podarcis muralis brogniardii
Total length: 19.6 cm, H.: 9 cm,
W.: 16 cm, D.: 14 cm, Wt: 250 g

ZoS 1027/1 ·
Common Wall Lizard, female

Podarcis muralis brogniardii
Total length: 16.5 cm, H.: 9 cm, W.: 16 cm, D.: 14 cm, Wt: 300 g

Detail: ventral side

ZoS 1027/3 · Common Wall Lizard, female

Podarcis muralis nigriventris, Eastern Bavarian Passau population
Total length: 17.3 cm, H.: 9 cm, W.: 16 cm, D.: 14 cm, Wt: 250 g

ZoS 1027/2 · Common Wall Lizard, male

Podarcis muralis nigriventris, Eastern Bavarian Passau population. Total length: 19.9 cm, H.: 9 cm, W.: 16 cm, D.: 14 cm, Wt: 250 g

Detail: ventral side

Manfred Eichler, Biological Model Maker from the SOMSO® Painting Department, painting an animal model.

Realistic, life-size Animal Models

Lizards

Nature is our Model SOMSO® Modelle

Zoology 6

ZoS 1029/1 · Viviparous Lizard, female

Zootoca v. vivipara
Total length: 13.5 cm,
H.: 6.5 cm, W.: 12 cm,
D.: 12 cm, Wt: 120 g

ZoS 1030/1 · Sand Lizard, female Grey-brown

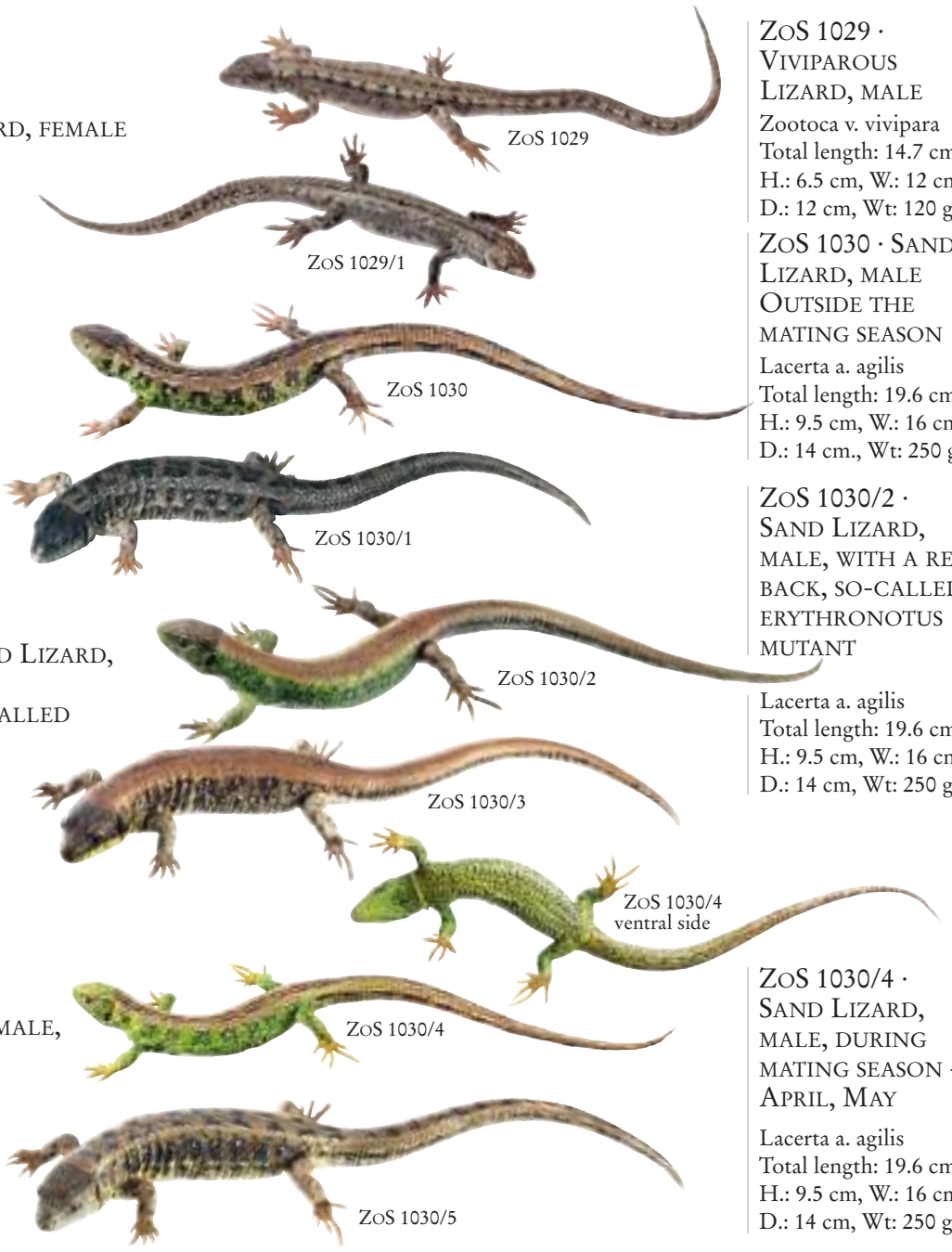
Lacerta a. agilis
Total length: 19.5 cm,
H.: 9.5 cm, W.: 16 cm,
D.: 14 cm, Wt: 330 g

ZoS 1030/3 · Sand Lizard, female, with a red back, so-called erythronotus mutant

Lacerta a. agilis
Total length: 19.5 cm,
H.: 9.5 cm, W.: 16 cm,
D.: 14 cm, Wt: 330 g

ZoS 1030/5 · Sand Lizard, female, pattern morph

Lacerta a. agilis
Total length: 19.5 cm,
H.: 9.5 cm, W.: 16 cm,
D.: 14 cm, Wt: 330 g



ZoS 1029 · Viviparous Lizard, male

Zootoca v. vivipara
Total length: 14.7 cm,
H.: 6.5 cm, W.: 12 cm,
D.: 12 cm, Wt: 120 g

ZoS 1030 · Sand Lizard, male outside the mating season

Lacerta a. agilis
Total length: 19.6 cm,
H.: 9.5 cm, W.: 16 cm,
D.: 14 cm., Wt: 250 g

ZoS 1030/2 · Sand Lizard, male, with a red back, so-called erythronotus mutant

Lacerta a. agilis
Total length: 19.6 cm,
H.: 9.5 cm, W.: 16 cm,
D.: 14 cm, Wt: 250 g

ZoS 1030/4 · Sand Lizard, male, during mating season - April, May

Lacerta a. agilis
Total length: 19.6 cm,
H.: 9.5 cm, W.: 16 cm,
D.: 14 cm, Wt: 250 g

ZoS 1028

(Image in natural size see page 155)

ZoS 1028 · Green Lizard, male

Lacerta viridis
Total length: 35.6 cm, H.: 7 cm, W.: 32 cm, D.: 19 cm, Wt: 500 g

ZoS 1028/1 · Green Lizard, female (half-grown)

Lacerta viridis
Total length: 23.4 cm, H.: 10 cm, W.: 14 cm, D.: 16 cm, Wt: 300 g

ZoS 1028/1

ZoS 1031

ZoS 1031 · Aesculapian Snake, male

Zamenis longissimus
Total length: 84.6 cm, H.: 7 cm, W.: 32 cm, D.: 19 cm, Wt: 500 g

ZoS 1031/2 · Aesculapian Snake, male, olive brown

Zamenis longissimus
Total length: 84.6 cm, H.: 7 cm, W.: 32 cm, D.: 19 cm, Wt: 500 g

ZoS 1031 Detail: ventral side

ZoS 1031/1 · Aesculapian Snake, male, variant with light brown front of the body

Zamenis longissimus
Total length: 84.6 cm, H.: 7 cm, W.: 32 cm, D.: 19 cm, Wt: 500 g

ZoS 1033

ZoS 1033 · Grass Snake, female

Natrix natrix natrix
Total length: 84.9 cm, H.: 9.5 cm, W.: 18 cm, D.: 18 cm, Wt: 350 g

ZoS 1033 Detail
Characteristic yellow collar behind the head

ZoS 1033/1 · Barred Grass Snake, female

Natrix natrix helvetica (species status since 2017: Natrix helvetica)
Total length: 84.9 cm, H.: 9.5 cm, W.: 18 cm, D.: 18 cm, Wt: 350 g

ZoS 1033/1

Neozoan in Central Europe

ZoS 1222 ·
North American Bullfrog, male
Lithobates catesbeianus
(synonym: Rana catesbeiana)
Head-torso length: 14.5 cm, H.: 10 cm, W.: 18 cm, D.: 18 cm, Wt: 660 g

ZoS 1032 ·
Smooth Snake, male
Coronella a. austriaca
Total length: 56.4 cm,
H.: 10 cm,
W.: 18 cm.,
D.: 18 cm,
Wt: 290 g

ZoS 1032

ZoS 1034

ZoS 1034 · Dice Snake
Natrix tessellata
Total length: 53.5 cm, H.: 10 cm, W.: 14 cm,
D.: 16 cm, Wt: 340 g

ZoS 1032/DA ·
Smooth Snake, male
Danube population (Vienna) with reddish ventral scales
Coronella a. austriaca
Total length: 56.4 cm,
H.: 10 cm, W.: 18 cm,
D.: 18 cm, Wt: 290 g

ZoS 1032/DA Detail: ventral side

ZoS 1036/1

ZoS 1036/1 ·
Common Viper, also called Adder, melanic male
Vipera b. berus
Total length: 42 cm, H.: 9.5 cm, W.: 16 cm,
D.: 14 cm, Wt: 320 g

ZoS 1035 ·
Asp Viper
Vipera a. aspis
Total length: 71 cm,
H.: 10 cm,
W.: 18 cm,
D.: 18 cm,
Wt: 400 g

ZoS 1035

ZoS 1036/2

ZoS 1036/2 ·
Common Viper, also called Adder, adult male
Vipera b. berus
Total length: 41.2 cm, H.: 9.5 cm, W.: 16 cm,
D.: 14 cm, Wt: 320 g

ZoS 1036

ZoS 1036
Detail: ventral side

ZoS 1036 ·
Common Viper, also called Adder, young male
Vipera b. berus
Total length: 42 cm, H.: 9.5 cm, W.: 16 cm, D.: 14 cm, Wt: 280 g

Realistic, life-size Animal Models

Selected Representatives of the Western and Southern European Herpetofauna

Nature is our Model SOMSO® Modelle

ZoS 1206 · Mediterranean Chameleon
Chamaeleo c. chamaeleon
Total length: 23.2 cm, H.: 20 cm, W.: 26 cm, D.: 18 cm, Wt: 730 g

ZoS 1037 · Nose-horned Viper (Sand Viper), female
Vipera a. ammodytes
Total length: 47 cm, H.: 10 cm, W.: 18 cm, D.: 18 cm, Wt: 330 g

ZoS 1230 · Western Three-toed Skink
Chalcides striatus
Total length: 28 cm, H.: 6.5 cm, W.: 32 cm, D.: 19. cm, Wt: 460 g

ZoS 1205 Female

ZoS 1205 Male

ZoS 1205 Male - crest details

ZoS 1205 · Marbled Newt, male and female, in their aquatic form
Triturus marmoratus
Total length: female 14.1 cm, male 13 cm, H.: 10 cm, W.: 18 cm, D.: 18 cm, Wt: 435 g

ZoS 1205/3 Male

ZoS 1205/3 Female

ZoS 1205/3

ZoS 1205/3 · Marbled Newt, male and female, in their terrestrial form
Triturus marmoratus
Total length: female 14.1 cm, male 13 cm, H.: 10 cm, W.: 18 cm, D.: 18 cm, Wt: 435 g

ZoS 1211/1

ZoS 1211/1, ZoS 1211/2, ZoS 1211/3
Common Parsley Frog, female

Pelodytes punctatus,
3 colour and
pattern morphs,
respectively

ZoS 1211/3

ZoS 1211/2

ZoS 1211/1 · Common Parsley Frog, female
Pelodytes punctatus
Head-torso length:
4.5 cm, H.: 6 cm,
W.: 12 cm,
D.: 12 cm,
Wt: 140 g

ZoS 1211/2 · Common Parsley Frog, female
Pelodytes punctatus
Head-torso length: 4.5 cm, H.: 6 cm,
W.: 12 cm, D.:12 cm, Wt: 140 g

ZoS 1211/3 · Common Parsley Frog, female
Pelodytes punctatus
Head-torso length:
4.5 cm, H.: 6 cm,
W.: 12 cm, D.: 12 cm,
Wt: 140 g

Realistic, life-size Animal Models

Selected Representatives of the Western and Southern European Herpetofauna and others

Nature is our Model SOMSO® Modelle

Zoology 6

ZoS 2001

ZoS 2001 · Long-snouted Seahorse, male - without skin filaments (Lobes, filaments)
Hippocampus guttulatus,
synonym: Hippocampus ramulosus
Size: 7.3 cm (with base 9 cm),
Wt: 50 g

ZoS 1223

Cane toad - originally native to the area between South Texas and the Amazon region, it has now become one of the best known, yet also worrying, neozoans disturbing the ecological equilibrium. Hallucinogenic ear gland secretion

ZoS 1223 · Cane Toad
Rhinella marina
(synonym: Bufo marinus)
Head-torso length: 14.8 cm, H.: 10 cm,
W.: 18 cm, D.: 18 cm, Wt: 465 g

ZoS 1204

ZoS 1204 · Moorish Gecko
Tarentola m. mauritanica
Total length: 14.5 cm,
H.: 8 cm, W.: 12 cm,
D.: 12 cm, Wt: 200 g

ZoS 1204 : Detail of the ventral side

ZoS 1208

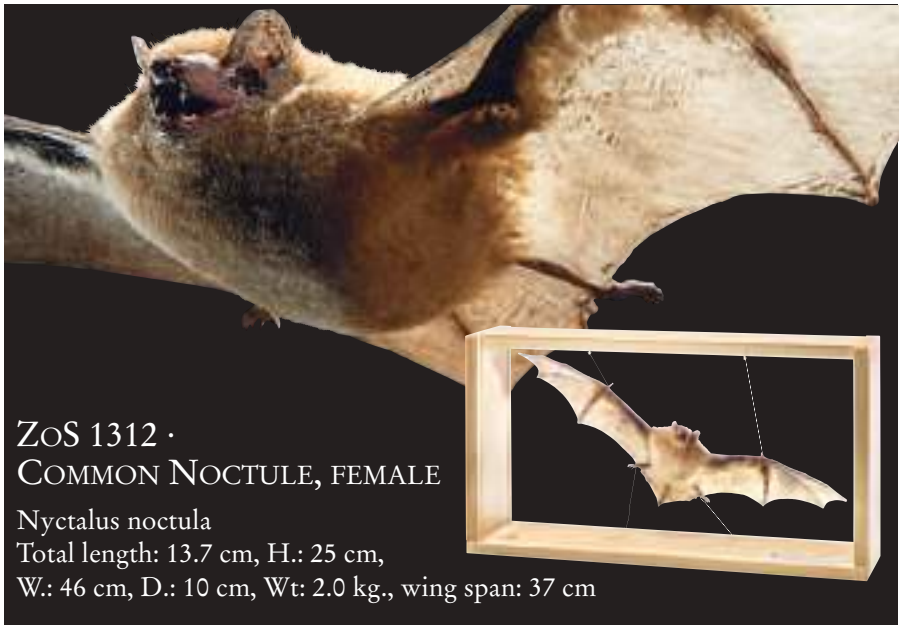
ZoS 1208 · Red Slug
Arion rufus
Total length: 13.5 cm, H.: 6 cm,
W.: 12 cm, D.: 12 cm, Wt: 150 g

ZoS 1207

ZoS 1207 · Roman Snail
Helix pomatia
Total length: 8.5 cm, H.: 7.5 cm,
W.: 12 cm, D.: 12 cm, Wt: 100 g

Realistic , life-size Animal Models Bats

Nature is our Model SOMSO® Modelle



ZoS 1312 · Common Noctule, female

Nyctalus noctula
Total length: 13.7 cm, H.: 25 cm,
W.: 46 cm, D.: 10 cm, Wt: 2.0 kg., wing span: 37 cm

ZoS 1306 · Common Pipistrelle, male

Pipistrellus pipistrellus
Total length: 7.3 cm, H.: 25 cm,
W.: 27 cm, D.: 10 cm, Wt: 1.15 kg,
wing span: 22 cm

ZoS 1306

Detail ZoS 1309

Detail ZoS 1308

ZoS 1309 · Brown Long-eared Bat, female

Plecotus auritus
Total length: 7.5 cm, H.: 25 cm,
W.: 30 cm, D.: 10 cm, Wt: 1.4 kg,
wing span: 23 cm

All bat models are delivered in a display case with Plexiglas panes.

ZoS 1308 · Greater Mouse-eared Bat, male

Myotis myotis
Total length: 12.2 cm, H.: 25 cm,
W.: 35 cm, D.: 10 cm, Wt: 1.75 kg,
wing span: 29 cm

Most diurnal poison dart frogs can be split into two roughly equal-sized groups. The frogs that are inconspicuously or cryptically coloured for camouflage purposes and the frogs with bright (aposematic) colours. The colours of the latter group warn of more or less poisonous secretions. These are produced in poison glands, which can be spread out over the entire skin surface.

Realistic, life-size Animal Models
Poison dart frogs
Explanatory notes on the models

Poison dart frogs (Dentrobatidae) from Central and South America

Among the poison dart frogs, the species with bright and vibrant warning colours in particular are counted among the jewels of the animal kingdom of the tropical rain forests of Central and South America.

The frogs are more or less poisonous, by secreting (more than 500 different) alkaloids through their skin.

Expanding settlement and exploitation activities by humans as well as decades of Chytridiomycosis caused by the fungus Batrachochytrium have led to poison dart frogs being increasingly threatened with extinction.

Explanatory notes on the models
Since in almost all cases there are no uniform German names, the respective binomial scientific names are used as model names. Due to the enormous variety of different phenotypes within the poison dart frog species, there is no classification of subspecies. Instead, they are called morphs.

The models displayed here show the ideal types of colour morphs of individual species. For reasons of manufacturing economy, the individual colour morphs of the respective species are represented on the basis of a uniform basic shape, and are therefore all of the same size. The Head-Torso Length (HTL) of the models of a species is stated on the inscription on the base; in case of smaller morphs, this can differ upwards in comparison with their natural dimensions.

The uniform HTL of 2.5 cm was chosen for Oophaga pumilio (Strawberry Poison Dart Frog), which is very variable in terms of colour and size. In this case, there is a minimum size of the model - for manufacturing as well as didactical reasons such as being able to view and handle the model. In nature, the HTL values of all colour morphs offered under ZoS 1254 are just or significantly below 2.5 cm.

Besides the name of the morphs in inverted commas, the inscription on the base also contains information regarding the distribution - i.e. country and, where it makes sense, more exact location.

Realistic, life-size Animal Models

Poison dart frogs

Golden Poison Frog (Phyllobates terribilis)

Nature is our Model SOMSO® Modelle

ZoS 1250
Golden Poison Frog, female, "Quebrada Quangui" yellow

ZoS 1250/5
Golden Poison Frog, female, "Mint" mint green

ZoS 1250/3 ·
Golden Poison Frog, female, "La Brea" cream-coloured

The Golden Poison Frog from the Southwest of Colombia is considered to be particularly poisonous. Its scientific name, Phyllobates terribilis, is an indication of that. The skin secretions containing brachotoxin are used by the Emberá indigenous people to poison their blowgun arrows. It is assumed that the poison dart frogs ingest preliminary stages of their poison by eating insects containing batrachotoxin as food components.

ZoS 1250 ·
Golden Poison Frog, female, "Quebrada Quangui" yellow
Phyllobates terribilis
Colombia, Cauca Department, Rio Saija drainage.
Head-torso length: 4.8 cm, H.: 6 cm, W.: 12 cm, D.: 12 cm, Wt: 147 g

ZoS 1250/3 ·
Golden Poison Frog, female, "La Brea" cream-coloured
Phyllobates terribilis
Colombia, Cauca Department, Rio Saija drainage
Head-torso length: 4.8 cm, H.: 6 cm, W.: 12 cm, D.: 12 cm, Wt: 147 g

ZoS 1250/1 ·
Golden Poison Frog, female, "Quebrada Quangui" orange-yellow
Phyllobates terribilis
Colombia, Cauca Department, Rio Saija drainage
Head-torso length: 4.8 cm, H.: 6 cm, W.: 12 cm, D.: 12 cm, Wt: 147 g

ZoS 1250/4 ·
Golden Poison Frog, female, "La Brea" cream-coloured with a hint of turquoise
Phyllobates terribilis
Colombia, Cauca Department, Rio Saija drainage
Head-torso length: 4.8 cm, H.: 6 cm, W.: 12 cm, D.: 12 cm, Wt: 147 g

ZoS 1250/2 ·
Golden Poison Frog, female, "Quebrada Quangui" orange
Phyllobates terribilis
Colombia, Cauca Department, Rio Saija drainage
Head-torso length: 4.8 cm, H.: 6 cm, W.: 12 cm, D.: 12 cm, Wt: 147 g

ZoS 1250/5 ·
Golden Poison Frog, female, "Mint" mint green
Phyllobates terribilis
Colombia, Cauca Department, Rio Saija drainage
Head-torso length: 4.8 cm, H.: 6 cm, W.: 12 cm, D.: 12 cm, Wt: 147 g

ZoS 1251 ·
Green and Black Poison Dart Frog, female, "Caribbean"
light metallic green, black
Dendrobates auratus
Caribbean side of S-Nicaragua, Costa Rica, and Panama, Head-torso length: 4.1 cm, H.: 6 cm, W.: 12 cm, D.: 12 cm, Wt: 141 g

Open-ground variant of ZoS 1251 Green and Black Poison Dart Frog, female - "Caribbean" at an on-site study from Christian Groß, Director of Studies

Realistic, life-size Animal Models
Poison dart frogs
Green and Black Poison Dart Frog (Dendrobates auratus)

ZoS 1251/1 ·
Green and Black Poison Dart Frog, female, "Pacific"
green, black
Dendrobates auratus
Pacific side of Costa Rica, Panama, and Colombia. Head-torso length: 4.1 cm, H.: 6 cm, W.: 12 cm, D.: 12 cm, Wt: 141 g

ZoS 1251/2 ·
Green and Black Poison Dart Frog, female, "Bronze", turquoise, lightly bronze-coloured
Dendrobates auratus
Panama, Coclé Province. Head-torso length: 4.1 cm, H.: 6 cm, W.: 12 cm, D.: 12 cm, Wt: 141 g

ZoS 1251/3 ·
Green and Black Poison Dart Frog, female, "Bronze", turquoise, bronze-brown
Dendrobates auratus
Costa Rica, Puntarenas Province. Head-torso length: 4.1 cm, H.: 6 cm, W.: 12 cm, D.: 12 cm, Wt: 141 g

ZoS 1251/4 ·
Green and Black Poison Dart Frog, female, "Calobre", blue, purple-black
Dendrobates auratus
Isthmus of Panama: Caribbean side. Head-torso length: 4.1 cm, H.: 6 cm, W.: 12 cm, D.: 12 cm, Wt: 141 g

ZoS 1251/5 ·
Green and Black Poison Dart Frog, female, "Kuna Jala" dark brown, cream white
Dendrobates auratus
Panama, Caribbean Lowlands. Head-torso length: 4.1 cm, H.: 6 cm, W.: 12 cm, D.: 12 cm, Wt: 141 g

ZoS 1251/6 ·
Green and Black Poison Dart Frog, female, "El Oro" (gold)
Dendrobates auratus
Panama. Head-torso length: 4.1 cm, H.: 6 cm, W.: 12 cm, D.: 12 cm, Wt: 141 g

ZoS 1251/7 ·
Green and Black Poison Dart Frog, female, "Colón", brown, individual green spots
Dendrobates auratus
Panama, on both sides of the Panama Canal towards the Caribbean Sea. Head-torso length: 4.1 cm, H.: 6 cm, W.: 12 cm, D.: 12 cm, Wt: 141 g

ZoS 1251/8 ·
Green and Black Poison Dart Frog, female, "Colón", black, individual green spots
Dendrobates auratus
Panama, on both sides of the Panama Canal towards the Caribbean Sea. Head-torso length: 4.1 cm, H.: 6 cm, W.: 12 cm, D.: 12 cm, Wt: 141 g

Realistic, life-size Animal Models

Poison dart frogs

Dyeing Poison Dart Frog (Dendrobates tinctorius)

Back and side

ventral side

ZoS 1252/4
Occasionally, the poisonous liquid, secreted in minuscule droplets, can be seen on the monochrome, black back section, especially of animals in the wild when they are exposed to a threat.

ZoS 1252
"Nominat"
is a large and particularly richly coloured poison dart frog

ZoS 1252 ·
Dyeing Poison Dart Frog, female, "Nominotypical Morph" black, yellow, blue
Dendrobates tinctorius
French Guiana. Head-torso length: 5.0 cm, H.: 6 cm, W.: 12 cm, D.: 12 cm, Wt: 146 g

ZoS 1252/3 ·
Dyeing Poison Dart Frog, female, "Awaradam" black, yellow, turquoise, blue
Dendrobates tinctorius
Suriname, Head-torso length: 5.0 cm, H.: 6 cm, W.: 12 cm, D.: 12 cm, Wt: 146 g

ZoS 1252/1 ·
Dyeing Poison Dart Frog, female, "Regina" black, yellow, throat and rear underside of the body slightly blue
Dendrobates tinctorius
French Guiana, Surroundings of Regina, Head-torso length: 5.0 cm, H.: 6 cm, W.: 12 cm, D.: 12 cm, Wt: 146 g

ZoS 1252/1

ZoS 1252/1

ZoS 1252/2 ·
Blue Poison Dart Frog, female, "Azureus" blue, black spots
Dendrobates tinctorius "azureus"
Suriname, Sipaliwini Savanna, Head-torso length: 5.0 cm, H.: 6 cm, W.: 12 cm, D.: 12 cm, Wt: 146 g

ZoS 1252/4 ·
Dyeing Poison Dart Frog, female, "Kaiser Mountains – dark variant", black, white, yellow (more or less)
Dendrobates tinctorius
Suriname, Head-torso length: 5.0 cm, H.: 6 cm, W.: 12 cm, D.: 12 cm, Wt: 146 g

Many poison dart frogs, like the Oophaga pumilio “Guacimo” morph from Costa Rica depicted here, are adapted to microhabitats, e.g. bromeliads, where they reproduce and raise their young - brood care.

Realistic, life-size Animal Models

Poison dart frogs

Harlequin Poison Frog (Oophaga histrionica)

Nature is our Model SOMSO® Modelle

Zoology 6

ZoS 1253 ·
Harlequin Poison Frog, female, "Baudó" black, red
Oophaga histrionica
Colombia, Chocó Department, Head-torso length: 3.8 cm, H.: 6 cm, W.: 12 cm, D.: 12 cm, Wt: 138 g

ZoS 1253/3 ·
Harlequin Poison Frog, female "Bullseye" brown, with orange spot on its back
Oophaga histrionica, Colombia, Risaralda Department.
Head-torso length: 3.8 cm, H.: 6 cm, W.: 12 cm, D.: 12 cm, Wt: 138 g

ZoS 1253/1 ·
Harlequin Poison Frog, female "Pangaia" red, with black spots
Oophaga histrionica
Colombia, Chocó Department, Head-torso length: 3.8 cm, H.: 6 cm, W.: 12 cm, D.: 12 cm, Wt: 138 g

ZoS 1253/4 ·
Harlequin Poison Frog, female, "Anchicayá" black, with yellow bands
Oophaga histrionica, Colombia, Valle del Cauca Department.
Head-torso length: 3.8 cm, H.: 6 cm, W.: 12 cm, D.: 12 cm, Wt: 138 g

ZoS 1253/2 ·
Harlequin Poison Frog, female "Baudó" black, with orange spots
Oophaga histrionica
Colombia, Chocó Department, Head-torso length: 3.8 cm, H.: 6 cm, W.: 12 cm, D.: 12 cm, Wt: 138 g

ZoS 1253/5
Harlequin Poison Frog, female, “Risaralda blue”
Oophaga histrionica
Colombia, Risaralda Department.
Head-torso length: 3.8 cm,
H.: 6 cm, W.: 12 cm, D.: 12 cm, Wt: 138 g

Realistic, life-size Animal Models

Poison dart frogs

Strawberry Poison Dart Frog (Oophaga pumilio)

Nature is our Model SOMSO® Modelle

ZoS 1254/2 ·
Strawberry Poison Dart Frog, female, "Rio Blanco“ (generally "Blue Jeans") orange-red with blue legs
Oophaga pumilio
Costa Rica, Provincia de San José. Head-torso length: 2.5 cm, H.: 6 cm, W.: 12 cm, D.: 12 cm, Wt: 135 g

ZoS 1254 ·
Strawberry Poison Dart Frog, female, "Bri-Bri" red* with black-brown dots
Oophaga pumilio
Costa Rica, Caribbean coast. Head-torso length: 2.5 cm, H.: 6 cm, W.: 12 cm, D.: 12 cm, Wt: 135 g
* also called "strawberry (poison dart) frog" in a narrow case, due to its red colouring

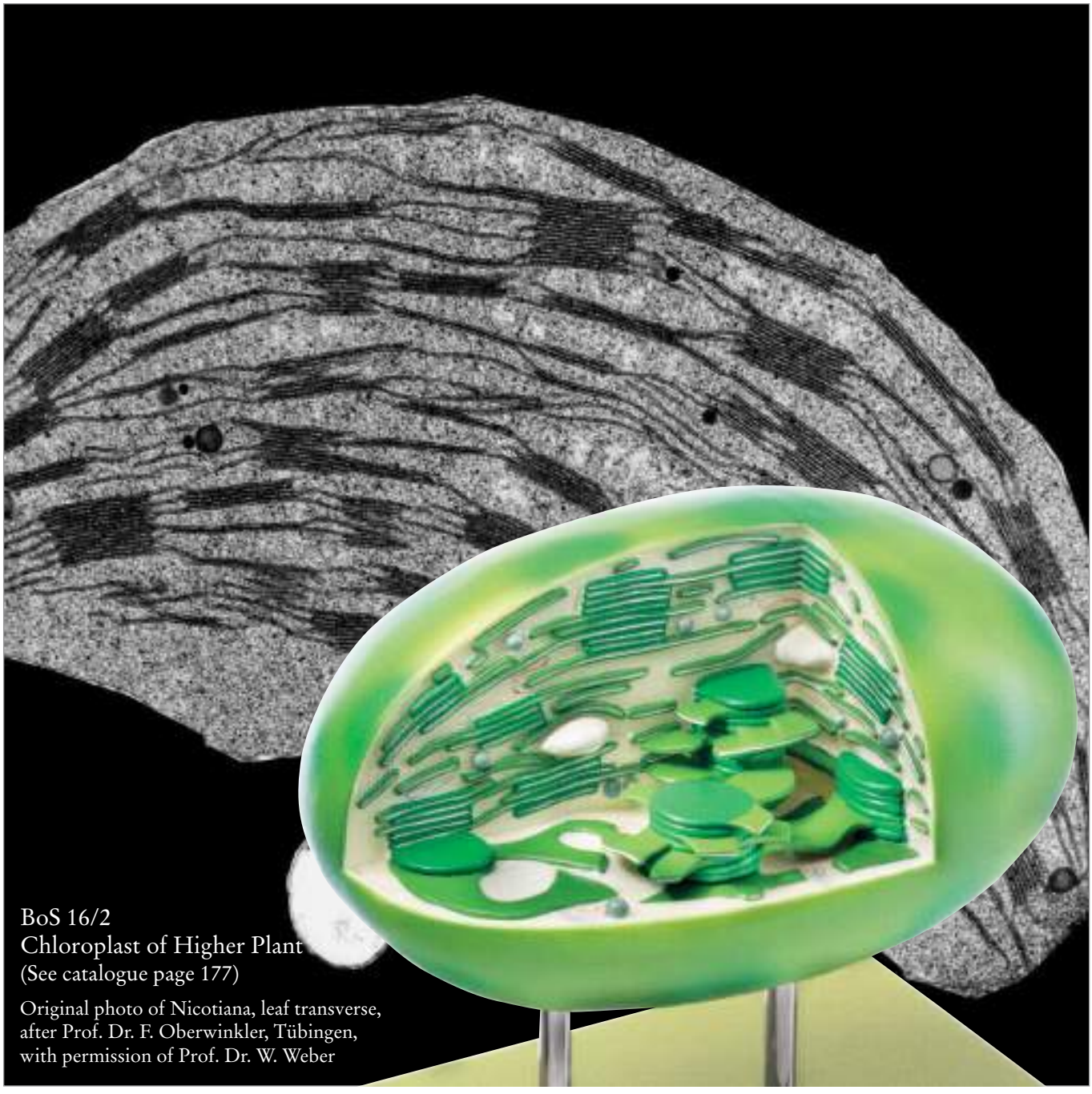
ZoS 1254/4 ·
Strawberry Poison Dart Frog, female, "Bastimentos West" cream-coloured/orange, brown spots/dots
Oophaga pumilio
Panama, Isla Bastimentos (Bocas del Toro Archipelago) Head-torso length: 2.5 cm, H.: 6 cm, W.: 12 cm, D.: 12 cm, Wt: 135 g

ZoS 1254/1 ·
Strawberry Poison Dart Frog, female, "Bastimentos West" red*, brown spots/dots
Oophaga pumilio
Panama, Isla Bastimentos (Bocas del Toro Archipelago). Head-torso length: 2.5 cm, H.: 6 cm, W.: 12 cm, D.: 12 cm, Wt: 135 g

ZoS 1254/5 ·
Strawberry Poison Dart Frog, female, "Aguacate" blue
Oophaga pumilio
Panama, Aguacate peninsula, Bocas del Toro Province Head-torso length: 2.5 cm, H.: 6 cm, W.: 12 cm, D.: 12 cm, Wt: 135 g

ZoS 1254/3 ·
Strawberry Poison Dart Frog, female, "Colón" green/yellow with brown/black dots/spots
Oophaga pumilio
Panama, Isla Colón (Bocas del Toro Archipelago). Head-torso length: 2.5 cm, H.: 6 cm, W.: 12 cm, D.: 12 cm, Wt: 135 g

ZoS 1254/6 ·
Strawberry Poison Dart Frog, female, "Colón" greenish/yellow, brown/black dots/spots
Oophaga pumilio
Panama, Isla Colón (Bocas del Toro Archipelago), Head-torso length: 2.5 cm, H.: 6 cm, W.: 12 cm, D.: 12 cm, Wt: 135 g



BoS 16/2
Chloroplast of Higher Plant
(See catalogue page 177)

Original photo of Nicotiana, leaf transverse,
after Prof. Dr. F. Oberwinkler, Tübingen,
with permission of Prof. Dr. W. Weber

Introduction to Botany:

SOMSO® Botanical Models are categorized mainly by plant system.

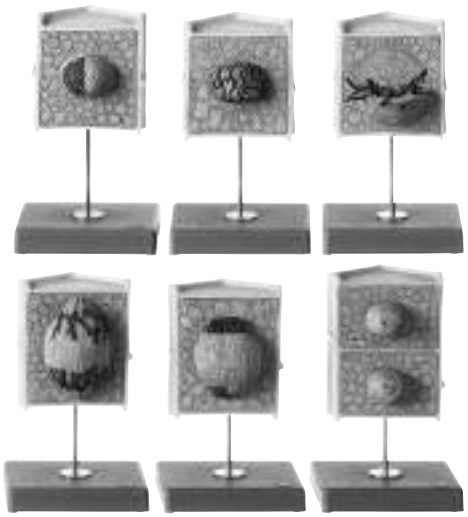
While the catalogue was being printed, it was brought to our knowledge that fungi are now classified as a separate group of organisms, of equal rank with the other kingdoms of plants and animals. Unfortunately, this new systematic classification can not be taken into consideration in the current catalogue.

Plant Morphology

Nature is our Model SOMSO® Modelle

Botany 1

The following models are of a general nature and cannot be classified into the plant system:



Bo 22/1

Bo 22/1 · Series of Models showing the typical indirect Plant Mitosis

Enlarged approximately 4,500 times, after Prof. Dr. W. Jung. Shown in the cells of the root of the onion (Allium cepa). Models are made on the basis of double-stained microscopic slides (nucleus stained by haematoxylin-Heidenhain and plasma by eosin). **Comprises 6 individually mounted models. Each in one piece.** On a stand with green base. Weight of the series: 3.6 kg

BoS 16

BoS 16 · Plant Cell

Enlarged 3,000 times, in **SOMSO-PLAST®**. After Prof. Dr. W. Jung. Showing the microscopic fine structure. On a green base. **Cannot be disassembled.** H. 6.5 cm, W. 32 cm, D. 19 cm, Wt 860 g

BoS 16/1 back view

BoS 16/1 - Detail: nucleus

BoS 16/1 · Plant Cell

Enlarged approximately 6,000 times, made from special transparent plastic. After Prof. Dr. W. Weber. The model provides a slightly schematic picture of a mature cell from the assimilation tissue of a plant. It combines both light and electron microscope aspects and shows the cell components mostly with their electron microscopic structure. In addition to the layering of the cell wall it shows the configuration of the cytoplasm and the essential cell organelles, such as the nucleus, chloroplasts, mitochondria, endoplasmatic reticulum, dictyosomes, and ribosomes. The transparent material gives an insight into the structures behind the section thus eliminating the need for dismantling the model. The base represents the neighbouring cells. On a transparent base. **In one piece.** Height: 35 cm, width: 30 cm, depth: 26 cm, weight: 1.7 kg

List of SOMSO® models according to plant system

Plant Morphology

Nature is our Model SOMSO® Modelle

Botany 1

BoS 15/10

BoS 15/10 · Example of a not united Perianth of an Angiosperm Flower

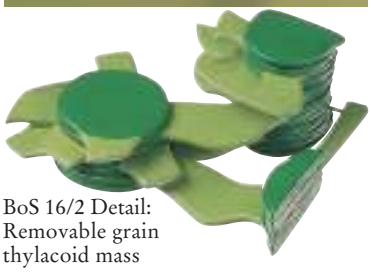
Enlarged approximately 10 times, in **SOMSO-PLAST®.** After Prof. Dr. W. Jung. The model shows the median longitudinal section of a flower with removable individual parts. **Separates into 11 parts.** On a green base. Height: 53 cm, width: 44 cm, depth: 38 cm, weight: 2.25 kg

BoS 19 · Fertilisation of Angiosperms

Polygonum type, **enlarged 300 times,** in **SOMSO-PLAST®.** After Prof. Dr. W. Jung. Longitudinal section showing ovary with germinating pollen grains and embryo sac, stamen with pollen in sagittal section. Showing in detail the microscopic structure. On a green base. **In one piece.** Height: 52 cm, width: 30 cm, depth: 13 cm, weight: 3 kg

BoS 19

BoS 16/2
(For detail see page 175)



BoS 16/2 Detail: Removable grain thylacoid mass

BoS 16/2 Detail: grain and stromathylacoids

BoS 16/2 · Chloroplast of Higher Plant

Enlarged approximately 60,000 times, in **SOMSO-PLAST®.** After Prof. Dr. W. Weber. The model shows the submicroscopic fine structure of a chloroplast on three vertical plane cross sections with the outer and inner chloroplast membrane, grain and stroma thylacoids, plastid stroma, starch inclusions, and osmiophile globules. The grain thylacoid masses lie in front of the cross section planes and can be taken out together with the linking stroma thylacoids. Due to the three cross sectional planes and the superimposed and removable parts, the model gives a depth of dimension as achieved when viewing cross sections through electron microscopes. **Separable into 2 parts.** On a stand with green base. Height: 36 cm, width: 39 cm, depth: 26 cm, weight: 3.5 kg

BoS 14/4 · Field Horsetail

Equisetum arvense, sporophyll with sporangia, **enlarged approximately 50 times,** spore with unrolled and rolled up spore bands **enlarged approximately 500 times,** in **SOMSO-PLAST®.** After Prof. Dr. W. Weber. **In one piece.** On a stand with green base. Height: 24 cm, width: 33 cm, depth: 15 cm, weight: 900 g

BoS 14/4

BoS 14/4-A · Field Horsetail

Equisetum arvense, fertile shoot, **enlarged approximately 6 times,** sporophyll with sporangia **enlarged approximately 50 times,** vegetative shoot **enlarged approximately 3 times,** in **SOMSO-PLAST®.** After Prof. Dr. W. Weber. On a stand with green base. **Cannot be disassembled.** Height: 36 cm, width: 33 cm, depth: 15 cm, weight: 1.2 kg

BoS 14/4-A

BoS 14/5

BoS 14/5 · Male Fern, Prothallium

Dryopteris filix-mas, **enlarged approximately 45 times,** in **SOMSO-PLAST®.** After Prof. Dr. W. Weber. One group each of antheridia and archegonia are on the underside of the prothallium, as well as numerous rhizoids that serve to anchor it to the ground. A small fern has developed from the fertilized egg cell of an archegonium. It consists of a juvenile leaf and a first root. **In one piece.** On a stand with a green base. Height: 32 cm, width: 26 cm, depth: 22 cm, weight: 1.1 kg

BoS 14/5-A

BoS 14/5-A · Male Fern, Spore Formation

Dryopteris filix-mas, **enlarged approximately 550 times (sporangium) / 850 times (spore tetrad and germination),** in **SOMSO-PLAST®.** After Prof. Dr. W. Weber. A sub-model shows a sporangium in the moment of opening. In addition to this, a spore tetrad and a spore germinating onto a prothallium are shown and enlarged to a greater extent. **In one piece.** On a stand with green base. Height: 30 cm, width: 18.5 cm, depth: 19 cm, weight: 1.2 kg

BoS 14/6

BoS 14/6 · Moss, Gametophyte with Sporophyte

Mnium affine, **enlarged approximately 12 times, consists of 6 parts,** in **SOMSO-PLAST®.** After Prof. Dr. W. Weber. The mature sporogonium with seta can be replaced with an immature sporogonium with seta, an antheridium or an archegonium. The calyptra on the mature sporogonium is detachable. On a stand with green base. H.: 37 cm, W.: 18 cm, D.: 20 cm, Wt: 930 g

BoS 14/3-A

BoS 14/3-A · Liverwort

BoS 14/2 · Liverwort

Marchantia polymorpha. Antheridium, **enlarged approximately 1,500 times,** in **SOMSO-PLAST®.** After Prof. Dr. W. Weber. **In one piece.** On a green base. Height: 35 cm, width: 18 cm, depth: 18 cm, weight: 1.14 kg

BoS 14/3 · Liverwort

Marchantia polymorpha. Archegonium, **enlarged approximately 1,000 times,** in **SOMSO-PLAST®.** After Prof. Dr. W. Weber. **In one piece.** On a green base. Height: 35 cm, width: 18 cm, depth: 18 cm, weight: 720 g

BoS 14/2

BoS 14/3

Marchantia polymorpha, **enlarged approximately 10 times,** in **SOMSO-PLAST®.** After Prof. Dr. W. Weber. Thallus with three gemma cups each containing gemmae. The thallus becomes either male or female by attaching the two antheridial or two archegonial branches. One antheridial branch has been cut vertically and **one part of it can be removed. Separable into 6 parts.** On a green base. Height: 19 cm, width: 26 cm, depth: 32 cm, weight: 1 kg

BoS 15/7 · Model showing Germination

A collection for comparing the germination of rye **(10 times enlarged),** bean **(5 times enlarged),** and spruce **(20 times enlarged)**. In **SOMSO-PLAST®.** After Prof. Dr. W. Jung and Prof. Dr. W. Weber. The model clearly demonstrates that: 1) the rye seed (Secale cereale) seed pushes up from the soil a green shoot - monocotyle plant, 2) the bean (Phaseolus vulgaris) first appears as a two-leaved shoot - dicotyle plant and 3) the shoot of the spruce (Picea excelsa) appears from the soil by unfolding star-shaped cotyledons. **Separable into 8 parts.** On a green base. Height: 37 cm, width: 58 cm, depth: 21 cm, weight: 3.5 kg

BoS 21

BoS 21 · Anatomical Fine Structure of Pinewood

Pinus sylvestris, **enlarged approximately 350 times,** in **SOMSO-PLAST®.** After Prof. Dr. W. Jung. The model shows the anatomical structure of pine wood in various sections: transverse, radial longitudinal, and tangential longitudinal through the cambium, early wood, late wood, and bark. **Cannot be disassembled,** on a green base. Height: 15 cm, width: 65 cm, depth: 25 cm, weight: 5.1 kg

BoS 15/30

BoS 15/31

BoS 15/30 · Pine, male

Pinus sylvestris, flower **enlarged approximately 18 times,** stamen **enlarged approximately 90 times,** in **SOMSO-PLAST®.** After Prof. Dr. W. Weber. **Cannot be disassembled.** On a stand with green base. Height: 26 cm, width: 32 cm, depth: 14 cm, weight: 1.15 kg

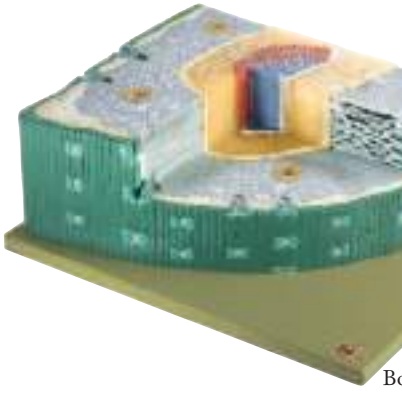
BoS 15/31-1

BoS 15/31 · Pine, female

Pinus sylvestris, inflorescence **enlarged approximately 20 times,** seed scale with ovules and covering scale **enlarged approximately 80 times,** in **SOMSO-PLAST®.** After Prof. Dr. W. Weber. **Separates into 3 parts.** On a stand with green base. Height: 28 cm, width: 32 cm, depth: 14 cm, weight: 1.35 kg

BoS 15/31-1 · Pine Cone Scale

Pinus silvestris, **enlarged approximately 8 times,** in **SOMSO-PLAST®.** After Prof. Dr. W. Weber. Mature seed scale with two winged seeds. **In one piece.** On a green base. Height: 18 cm, width: 14 cm, depth: 15 cm, weight: 500 g

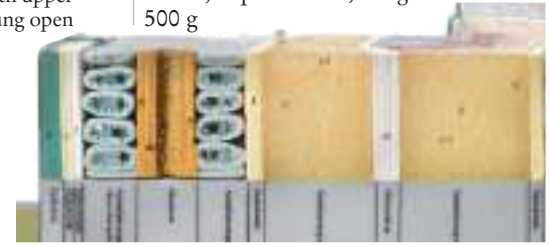


BoS 21/2

BoS 21/2 Detail: Detachable block from the mesophyll with upper palisade layer that can be swung open

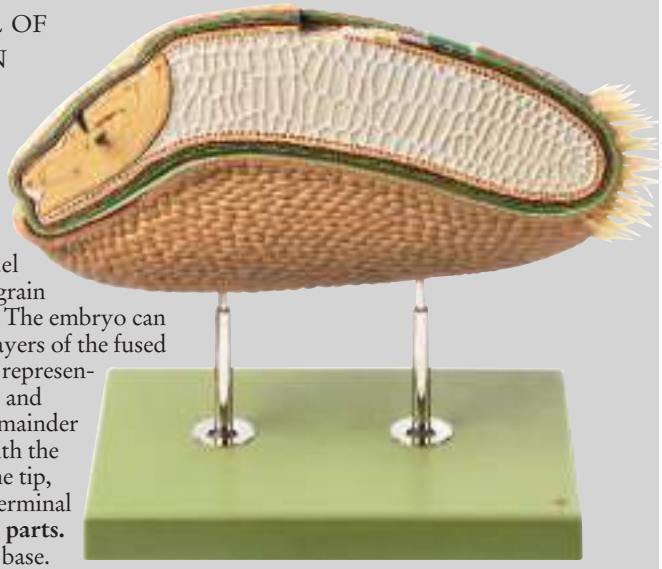
BoS 21/2 · Needle Leaf of the Black Pine (cross and longitudinal sections)

Pinus nigra, **enlarged approximately 300 times,** in **SOMSO-PLAST®. Separates into 3 parts,** on a green base. Height: 12 cm, width: 26 cm, depth: 32 cm, weight: 2.36 kg



BoS 21/2 Detail: Longitudinal section with a schematic diagram of the layers

BoS 18 · Model of a Wheat Grain Cross Section



Triticum aestivum L., **enlarged approximately 75 times,** in **SOMSO-PLAST®.** After Prof. Dr. W. Jung. The model demonstrates a wheat grain divided longitudinally. The embryo can be removed. The cell layers of the fused fruit and seed shell are represented cross, longitudinal, and surface section. The remainder of the pistil cushion with the "beard" is located at the tip, opposite to the basal germinal layer. **Separable into 2 parts.** On a stand with green base. Height: 43 cm, width: 53 cm, depth: 26 cm, weight: 4.2 kg

BoS 15/2 · Garden Tulip, Flower

Tulipa gesneriana, **enlarged approximately 4 times,** in **SOMSO-PLAST®.** After Prof. Dr. W. Jung. One half of the corolla can be removed to show the stamens and the pistil. **Separates into 3 parts.** On a green base. Height: 45 cm, width: 18 cm, depth: 16 cm, weight: 1.2 kg

BoS 15/2 disassembled

BoS 15/3 · Tulip Bulb

Tulipa gesneriana, **enlarged approximately 5 times,** in **SOMSO-PLAST®.** The model shows a longitudinal section of the structure of a sprouting tulip bulb. **Separates into 3 parts,** on a green base. Height: 30 cm, width: 18 cm, depth: 18 cm, weight: 810 g

BoS 15/3

BoS 20/2 · Root Tip of a Monocotyledonous Plant in Longitudinal and Cross Section

Barley, Hordeum vulgare, **enlarged approximately 200 times,** in **SOMSO-PLAST®. Cannot be disassembled,** on a green base. Height: 37 cm, width: 18 cm, depth: 18 cm, weight: 1.5 kg

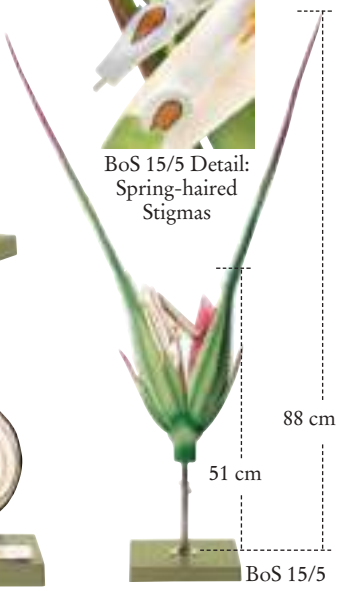
BoS 17/3 · Maize Leaf in Longitudinal and Cross Section

Zea mays, **enlarged approximately 450 times,** in **SOMSO-PLAST®.** After Prof. Dr. W. Weber. The model shows the special leaf structure of a C4 plant. The vascular bundles are enclosed by a sheath in ring form. Reflecting the biochemical work distribution during photosynthesis, the chloroplasts of the sheath are significantly larger than the chloroplasts of the mesophyll cells. The vascular bundles are interlinked with each other by transversal anastomoses. **In one piece,** on a stand with green base. Height: 28.5 cm, width: 48 cm, depth: 15 cm, weight: 2.2 kg

BoS 17/3

BoS 20/2

BoS 15/5 Detail: Spring-haired Stigmas



BoS 15/5

BoS 15/5 · Rye Spikelet

Secale cereale, **enlarged approximately 25 times,** in **SOMSO-PLAST®.** After Prof. Dr. W. Jung. **Separates into 7 parts.** The grass spikelet model shows the typical structure of wind pollination. On a stand with green base. Height: 51 cm, width: 38 cm, depth: 18 cm, weight: 1.25 kg

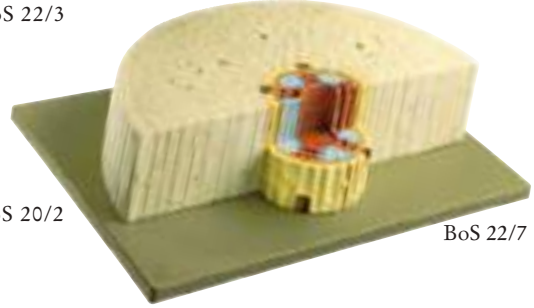
BoS 22/3 · Section through the Peripheral Part of a Monocotyle Stem

Maize, Zea mays, **enlarged approximately 550 times,** in **SOMSO-PLAST®.** After Prof. Dr. W. Jung. **Cannot be disassembled,** on a green base. Height: 12 cm, width: 28 cm, depth: 39 cm, weight: 2.28 kg

BoS 22/3

BoS 22/7 · Shallot Root

Allium ascalonicum, **enlarged approximately 350 times,** in **SOMSO-PLAST®. Cannot be disassembled,** on a green base. Height: 10.5 cm, width: 39 cm, depth: 28 cm, weight: 2.56 kg



BoS 22/7

BoS 15/8 · Flower of the Grape Vine

Vitis vinifera, **enlarged approximately 50 times,** in **SOMSO-PLAST®.** After Prof. Dr. W. Weber. The corolla leaves are fused as in nature. The corolla is removable as a whole. The ovary is cut longitudinally. One part can be removed with two of the five stamens and the two ovary compartments with ovules are to be seen. **Separable into 3 parts.** On a stand with green base. Height: 38 cm, width: 18 cm, depth: 18 cm, weight: 1.35 kg

BoS 14/10 · Military Orchid, Flower

Orchis militaris, **enlarged 13 times,** in **SOMSO-PLAST®** After Prof. Dr. W. Weber. The model depicts the complicated structure of an orchid flower. **Separable into 5 parts.** On a green base. Height: 26 cm, width: 19 cm, depth: 32 cm, weight: 900 g

Angiosperms
Dicotyledonous Plants

Nature is our Model SOMSO® Modelle

Botany 4

BoS 1 partly disassembled

BoS 2

BoS 3

BoS 15/9

BoS 15/1

BoS 1 · Apple Blossom

Malus domestica, **enlarged approximately 10 times.** In **SOMSO-PLAST®,** after Prof. Dr. W. Jung. **Separates into 6 parts.** On a stand with green base. H.: 39 cm, W.: 45 cm, D.: 45 cm, Wt: 1.84 kg

BoS 2 · Apple Blossom - Cross Section of the Ovary

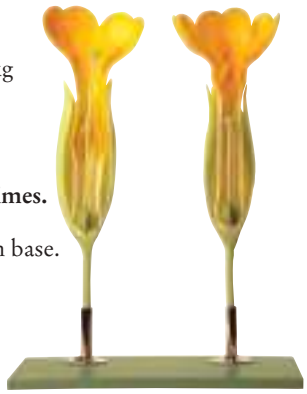
Malus domestica, **enlarged approximately 10 times.** In **SOMSO-PLAST®,** after Prof. Dr. W. Jung. **Cannot be disassembled.** On a stand with green base. H.: 20 cm, W.: 14 cm, D.: 16 cm, Wt: 420 g

BoS 3 · Apple Blossom - Longitudinal Section of the Ovary

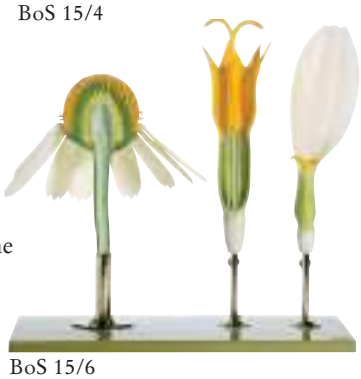
Malus domestica, **enlarged approximately 10 times.** In **SOMSO-PLAST®,** after Prof. Dr. W. Jung. **Cannot be disassembled.** On a stand with green base. H.: 39 cm, W.: 18 cm, D.: 18 cm, Wt: 650 g

BoS 15/4 · Scented Primrose

Cowslip, Primula officinalis, in **SOMSO-PLAST®.** After Prof. Dr. W. Weber. Median section through one flower with a long and one with a short style, **enlarged approximately 13 times. In one piece.** On a stand with green base. Height: 43 cm, width: 34 cm, depth: 15 cm, weight: 1.1 kg



BoS 15/4



BoS 15/6

BoS 15/1 · Meadow Clary

Salvia pratensis, **enlarged approximately 15 times,** in **SOMSO-PLAST®.** After Prof. Dr. W. Jung. **Cannot be disassembled,** on a stand with green base. The forward-rocking mechanism of the stamens can be demonstrated. H.: 36 cm, W.: 33 cm, D.: 18 cm, Wt: 840 g

BoS 15/9 · Potato Flower

Solanum tuberosum, **enlarged approximately 10 times,** in **SOMSO-PLAST®.** After Prof. Dr. W. Weber. Seperable by removal of the ovary with style and stamens. The ovary is cut longitudinally and one half of the ovary with two stamens can be removed. **Separable into 3 parts.** On a stand with green base. Height: 39 cm, width: 24 cm, depth: 29 cm, weight: 1 kg

BoS 15/6 · Real Camomile

Matricaria chamomilla, inflorescence (anthodium), **enlarged approximately 9 times,** in **SOMSO-PLAST®.** After Prof. Dr. W. Weber. Ligulate flower enlarged 20 times, tubular flower enlarged 80 times. **Cannot be disassembled.** On a stand with green base. H.: 33 cm, W.: 35 cm, D.: 16,5 cm, Wt: 1 kg

BoS 15/14 · Willow Flower, Male and Female

Enlarged approximately 80 times, in **SOMSO-PLAST®.** After Prof. Dr. W. Weber. **In one piece.** On a stand with green base. Height: 35 cm, width: 33 cm, depth: 15 cm, weight: 1 kg.

BoS 15/14-A · Willow Catkin

Enlarged approximately 8 times, in **SOMSO-PLAST®.** After Prof. Dr. W. Weber. A male and a female catkin. Interchangeable and hinged. **Separable into 5 parts.** On a green base. Height: 37 cm, width: 18 cm, depth: 18 cm, weight: 1.34 kg

BoS 15/11

BoS 15/12 disassembled

BoS 15/15

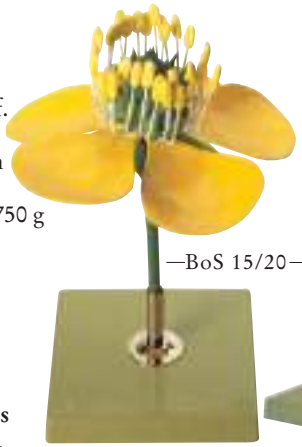
BoS 15/11 · Rape Flower

Brassica napus, **enlarged approximately 10 times,** in **SOMSO-PLAST®.** After Prof. Dr. W. Weber. **Separates into 2 parts.** On a stand with green base. Height: 35 cm, width: 29 cm, depth: 28 cm, weight: 750 g

BoS 15/12 · Rape Pod

Brassica napus, **enlarged approximately 8 times,** in **SOMSO-PLAST®.** After Prof. Dr. W. Weber. **Separates into 4 parts.** On a green base. Height: 51 cm, width: 18 cm, depth: 18 cm, weight: 650 g

BoS 15/16 disassembled



—BoS 15/20—

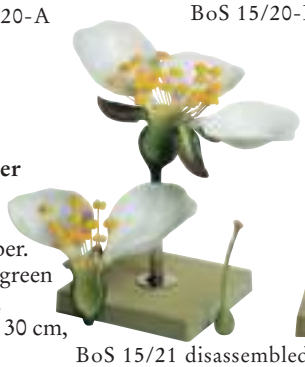
BoS 15/20-A

BoS 15/20-B

BoS 15/20-A Flower and BoS 15/20-B Fruit also available individually

BoS 15/20 · Buttercup, Flower and Fruit

Meadow buttercup, Ranuculus acer, **flower enlarged approximately 10 times, fruit enlarged approximately 20 times,** in **SOMSO-PLAST®.** After Prof. Dr. W. Weber. **Cannot be disassembled.** On a stand with green base. Flower: Height: 34 cm, width: 26 cm, depth: 26 cm, weight: 830 g. Fruit: Height: 30 cm, width: 18 cm, depth: 18 cm, weight: 740 g



BoS 15/21 disassembled

BoS 15/19

BoS 15/15 · Pea, Flower

Pisum sativum, **enlarged approximately 8 times,** in **SOMSO-PLAST®. Separates into 3 parts.** On a stand with green base. Height: 39 cm, width: 22 cm, depth: 32 cm, weight: 800 g

BoS 15/16 · Pea, Pod

Pisum sativum, **enlarged approximately 8 times,** in **SOMSO-PLAST®.** After Prof. Dr. W. Weber. **Separable into 3 parts.** On a stand with green base. Height: 15 cm, width: 39 cm, depth: 15 cm, weight: 1 kg

BoS 15/19 · Dandelion, Inflorescence, Individual Blossom and Fruit

Taraxacum officinale, **enlarged approximately 8 times + 16 times,** in **SOMSO-PLAST®.** After Prof. Dr. W. Weber. On a green base. Height: 36 cm, width: 33 cm, depth: 18 cm, weight: 1.26 kg

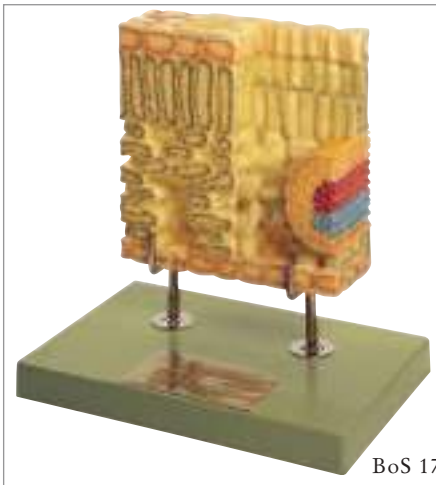
BoS 15/21 · Cherry Blossom

Sweet cherry, Prunus avium, **enlarged approximately 9 times,** in **SOMSO-PLAST®.** After Prof. Dr. W. Weber. **Separates into 3 parts.** On a stand with green base. Height: 30 cm, width: 30 cm, depth: 30 cm, weight: 800 g

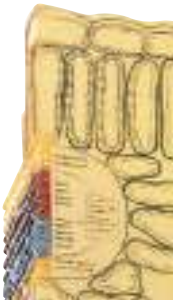
BoS 15/33 disassembled

BoS 15/33 · Fruit of the Cacao

Theobroma cacao. **Natural size,** in **SOMSO-PLAST®.** After Prof. Dr. W. Weber. **Separates into 7 parts.** On a green base. Height: 30 cm, width: 18 cm, depth: 26 cm, weight: 1.15 kg



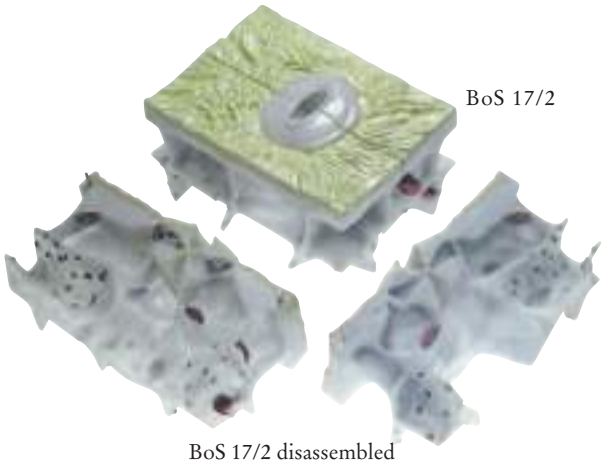
BoS 17/1



BoS 17/1 Detail: Pattern of the vascular bundle on the back of the model

BoS 17/1 · Section through a Christmas Rose Leaf

Helleborus niger, **enlarged 700 times,** in **SOMSO-PLAST®.** After Prof. Dr. W. Weber. The model shows the upper epidermis with cuticula, the assimilatory parenchyma (differentiated in palisade and spongy tissue with vascular bundle) and the lower epidermis with stomata. **In one piece,** on a stand with green base. Height: 40 cm, width: 39 cm, depth: 26 cm, weight: 3.72 kg



BoS 17/2

BoS 17/2 disassembled

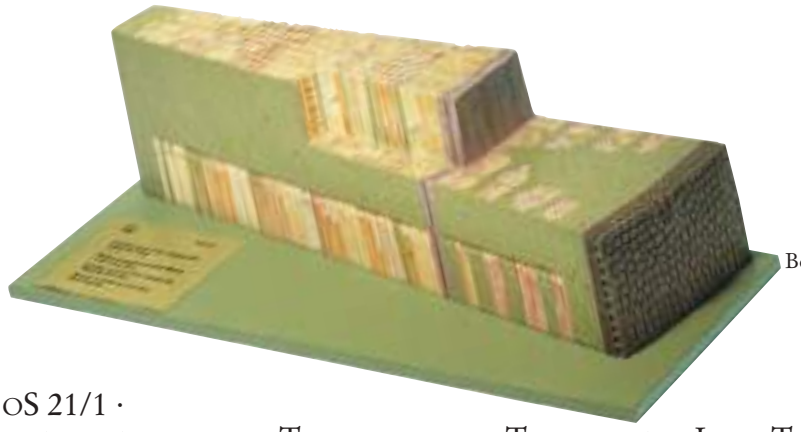
BoS 17/2 · Stoma from the Lower Surface of a Christmas Rose Leaf

Helleborus niger, **many times enlarged,** in **SOMSO-PLAST®.** After Dr. Gerlach, Botanical Institute Erlangen. Shown are guard cells, subsidiary cells, respiratory cavity. One half of the model shows the stoma, the other the function which can be demonstrated symbolically. **Separable into 2 parts.** Height: 21.5 cm, width: 39 cm, depth: 28 cm, weight: 5.1 kg

BoS 17

BoS 17 · Deciduous Leaf of the Christmas Rose

Helleborus niger, **enlarged 700 times,** in **SOMSO-PLAST®.** After Prof. Dr. W. Weber. Cross and longitudinal sections, showing the microscopical fine structure. **Cannot be disassembled.** On a green base. Height: 39 cm, width: 28 cm, depth: 11.5 cm, weight: 2.8 kg



BoS 21/1

BoS 21/1 · Section through a Two-year-old Twig of the Lime Tree

Tilia sp., **enlarged approximately 350 times,** in **SOMSO-PLAST®.** After preparations and drawings made by Prof. Dr. W. Jung. Sections through the dispersed porous type of wood show all the elements of the wood structure (transverse, longitudinal radial, and longitudinal tangential). **Cannot be disassembled,** on a green base. Height: 19 cm, width: 65 cm, depth: 25 cm, weight: 4.8 kg

The majority of the SOMSO® Botanical Models have been developed in close co-operation with Professor Dr. W. Weber.

Professor Weber († 2011) together with Mrs Viola Speer, taking a look at the model of a Section Through the Stem of a One-year-old Lime Tree BoS 22/4-E.

BoS 22 · Open Collateral Vascular Bundle

of a dicotyledonous plant, **enlarged approximately 550 times,** in **SOMSO-PLAST®.** After Prof. Dr. W. Jung. **Cannot be disassembled.** On a green base. Height: 14 cm, width: 32 cm, depth: 19 cm, weight: 1.4 kg

BoS 22

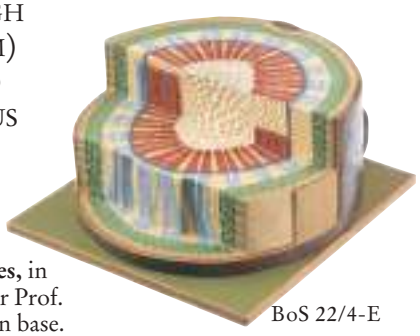
BoS 22/4 · Section through the Stem of a one Year Old Dicotyledonous Plant

Lime tree, Tilia cordata, somewhat simplified, **enlarged approximately 125 times,** in **SOMSO-PLAST®.** After Prof. Dr. W. Jung. **In one piece.** On a green base. Height: 33 cm, width: 31 cm, depth: 31 cm, weight: 4.3 kg

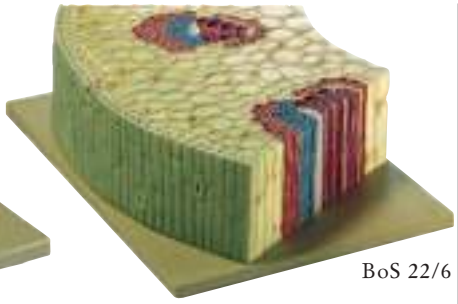
BoS 22/4

BoS 22/4-E · Section through the Wood (Stem) a one Year Old Dicotyledonous Plant

Small-leaved lime, Tilia cordata, slightly simplified, **enlarged approximately 125 times,** in **SOMSO-PLAST®.** After Prof. Dr. W. Weber. On a green base. **Cannot be disassembled.** Height: 16 cm, width: 31 cm, depth: 31 cm, weight: 3.2 kg



BoS 22/4-E



BoS 22/6

BoS 22/6 · Section through the Peripheral Part of the Stem of the Creeping Buttercup

Ranunculus repens, **enlarged approximately 450 times,** in **SOMSO-PLAST®.** After Prof. Dr. W. Weber. **Cannot be disassembled,** on a green base. Height: 11 cm, width: 39 cm, depth: 28 cm, weight: 2.9 kg

BoS 22/5

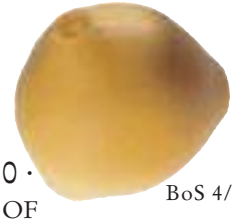
BoS 22/5 · Young Root of the Buttercup

Ranunculus acer, sectional model, **enlarged approximately 300 times,** in **SOMSO-PLAST®.** After Prof. Dr. W. Jung. **In one piece.** On a green base. Height: 22 cm, width: 46 cm, depth: 49 cm, weight: 7.3 kg

BoS 22/5-E

BoS 22/5-E · Young Root of the Meadow Buttercup

Ranunculus acer, **enlarged approximately 300 times,** in **SOMSO-PLAST®.** After Prof. Dr. W. Jung. **Cannot be disassembled,** on a green base. Height: 13 cm, width: 39.5 cm, depth: 28 cm, weight: 2.1 kg



BoS 4/10

BoS 4/10 · Model of Hazelnut Pollen Grain

Corylus avellana, **enlarged approximately 3,800 times,** in **SOMSO-PLAST®.** After Prof. Dr. Beug. **In one piece.** Weight: 100 g

Microscopic Fungi and Fungi Models

Botany 5

While the catalogue was being printed, Dr. Dieter Bräuninger has thankfully brought it to our attention that fungi are now classified as a separate group of organisms, of equal rank with the other kingdoms of plants and animals. Unfortunately, this new systematic classification can not be taken into consideration in the current catalogue.

BoS 244 Porcelain Fungus (see catalogue page 195)

The historic model of the Penny Bun from our SOMSO®-Museum was made around the turn of the 19th century and laid the foundation for our current entire range of fungi models, comprising more than 200 species.

Fungi Models

Nature is our Model SOMSO® Modelle

Botany 5

Detail:
Stem and SOMSO® company label with the information Sonneberg – Duchy of Saxe-Meiningen

Detail:
Descriptive text on the bottom of the base

BoS 23 · Death Cap

Amanita phalloides (VAILL. ex FR.) LINK. Group showing the seven most important stages of development, mounted on a green base. Deadly poisonous and extremely dangerous!

Detail:
Gills on the underside of the cap

BoS 24 · Honey Fungus

Armillaria mellea (VAHL ex FR.) P. KUMM. Group showing 6 different stages of development, mounted on a green base. Poisonous when raw and edible when cooked!

BoS 25 · Death Cap

Amanita phalloides (VAILL. ex FR.) LINK. 4 stages. Deadly poisonous and extremely dangerous!

BoS 28 · Chanterelle

Cantharellus cibarius FR. Edible.

BoS 26 · Field Mushroom

Agaricus campestris (L.) FR. Edible.

BoS 29 · Orange Bolete

Leccinum aurantiacum (BULL.) GRAY. Edible.

Bo 27 · Plums and Custard

Tricholomopsis rutilans (SCHFF. ex FR.) SING. Edible.

Detail:
Fine structure of the stem and the underside of the cap

BoS 31 · Penny Bun

Boletus edulis BULL. ex FR. Edible.

Bo 30 · Primrose Brittlegill

Russula sardonia FR. em ROM. Poisonous

BoS 36 · Slippery Jack

Suillus luteus (L. ex FR.) S.F. GRAY. Edible.

Bo 32 · Fleecy Milkcap

Lactarius vellereus (FR.) FR. Edible.

Bo 37 · Pig's Ear

Gomphus clavatus (PERS. ex FR.) S.F. GRAY. Edible.

Bo 33 · Grey Knight

Tricholoma terreum (SCHFF. ex FR.) KUMM. Edible.

Bo 38 · Velvet Roll-Rim

Paxillus atrotomentosus (BATSCH) FR. Of inferior quality.

BoS 34 · Bitter Bolete

Tylopilus felleus (BULL. ex. FR.) P. KARST. Inedible.

BoS 39 · Brown Roll-Rim

Paxillus involutus (BATSCH) FR. Poisonous.

Bo 35 · Rufous Milkcap

Lactarius rufus (SCOP. ex FR.) FR. Edible.

BoS 40 · Blusher

Amanita rubescens (PERS. ex FR.) GRAY. Edible.

SOMSO®
Fungi Models,
convincingly
natural

The model of the
Fly Agaric
BoS 41 in its habitat
of a large cluster.

Fungi Models

Nature is our Model SOMSO® Modelle

Botany 5

BoS 41 · Fly Agaric
Amanita muscaria (L. ex FR.) HOOKER. Poisonous.

Bo 42 · Gassy Webcap
Cortinarius traganus FR. Poisonous.

BoS 43 · Bay Bolete
Xerocomus badius (FR.) KÜHN. ex GILB. Edible.

BoS 44 · Horse Mushroom
Agaricus arvensis SCHFF. ex FR. Edible.

BoS 46 · Parasol Mushroom
Macrolepiota procera (SCOP. ex FR.) SING. Top edible. (Especially big mush-room).

BoS 47 · Velvet Bolete
Suillus variegatus (SWARTZ ex FR.) O. KTZE. Edible.

BoS 48 · Yellow Knight
Tricholoma flavovirens (PERS. ex FR.) LUND et NANNF. Poisonous.

BoS 49 · False Chanterelle
Hygrophoropsis aurantiaca (WULF. ex FR.) R. MRE. Edible, but of inferior quality.

Bo 50 · Brick Cap
Hypholoma sublateritium (FR.) QUÉL. Inedible.

BoS 51 · Saffron Milkcap
Lactarius deliciosus (L. ex FR.) GRAY. Edible.

BoS 45 · Parasol Mushroom
Macrolepiota procera (SCOP. ex FR.) SING. Top edible.

BoS 52 · Woolly Milkcap
Lactarius torminosus (SCHFF. ex FR.) S.F. GRAY. Poisonous.

BoS 53 · Devil's Bolete
Boletus satanas LENZ. Poisonous.

BoS 54 · Shingled Hedgehog
Sarcodon imbricatus (L. ex FR.) P. KARST. Edible, when young.

BoS 55 · Gypsy Mushroom
Rozites caperata (PERS. ex FR.) KARST. Edible.

BoS 56 · Common Earthball
Scleroderma citrinum PERS. Poisonous.

BoS 57 · Common Puffball
Lycoperdon perlatum PERS. ex PERS. Edible, when young.

Bo 58 · Trumpet Chanterelle Mushroom
Cantharellus tubaeformis (BULL ex FR.) QUÉL. Edible.

BoS 59 · Horn of Plenty
Craterellus cornucopioides (L. ex FR.) PERS. Edible.

BoS 60 · Field Blewit
Lepista personata (FR. ex FR.) CKE. Edible.

BoS 61 · Common Stinkhorn
Phallus impudicus L. ex PERS. Inedible.

BoS 62 · Honey Fungus
Armillaria mellea (VAHL ex FR.) P. KUMM Poisonous when raw and edible when cooked!

BoS 63 · Sheathed Woodtuft
Kuehneromyces mutabilis (SCHFF. ex FR.) SING. et SM. Edible.

Bo 64 · Albatrellus confluens
(ALB. et SCHW. ex FR.) KOTL. et POUZ. Edible when young

Detail BoS 79:
for text, see below, in numerical order

Fungi Models

Nature is our Model SOMSO® Modelle

Botany 5

BoS 71 · Greville's Bolete
Suillus grevillei (KLOTZSCH) SING. Edible.

BoS 72 · Panther Cap
Amanita pantherina (DC. ex FR.) SECR.
Very Poisonous.

Bo 73 · Weeping Milk Cap
Lactarius volemus FR.
Edible.

Bo 80 · Amethyst Deceiver
Laccaria amethystina (BOLT. ex HOOKER) MURR.
Edible.

Bo 81 · Shaggy Scalycap
Pholiota squarrosa (PERS. ex FR.) KUMM.
Inedible.

Bo 89 · Butter Bolete
Boletus appendiculatus (SCHFF. ex FR.) SECR. Edible.

Bo 90 · Albatrellus pes-caprae
(PERS. ex FR.) POUZ.
Edible.

Bo 82 · Birch Polypore
Piptoporus betulinus (BULL. ex FR.) KARST.
Inedible.

Bo 65 · Sweet Tooth
Hydnum repandum (L. ex FR.), Edible.

BoS 66 · False Death Cap
Amanita citrina (SCHFF.) S.F. GRAY.
Poisonous.

Bo 67 · Scaly Wood Mushroom
Agaricus silvaticus (SCHFF. ex SECR.), Edible.

BoS 68 · Rough-Stemmed Bolete
Leccinum scabrum (BULL. ex FR.) S.F. GRAY.
Edible.

Bo 69 · Slimy Spike Cap
Gomphidius glutinosus (SCHFF. ex FR.) FR.
Edible

Bo 70 · Bovine Bolete
Suillus bovinus (L. ex FR.) O. KTZE. Edible (tough).

Bo 74 · Clouded Funnel Mushroom
Lepista nebularis (FR.) HARMAJA.
Edible in small quantities.

Bo 75 · Sulphur Tuft
Hypholoma fasciculare (HUDS. ex FR.) KUMM.
Poisonous.

Bo 76 · Ramaria mairei
DONK.
Inedible.

Bo 77 · Bitter Beech Bolete
Boletus calopus FR. Poisonous.

BoS 78 · Forest Lamb
Albatrellus ovinus (SCHFF. ex FR.) KOTL. et POUZ.
Edible.

BoS 79 · Cauliflower Fungus
Sparassis crispa (WULF.) ex FR.
Edible.
Detail: see illustration above

Bo 83 · Ugly Milk-cap
Lactarius necator (BULL. em. PERS. ex FR.) KARST.
Inedible.

Bo 84 · Dotted Stem Bolete
Boletus erythropus (FR. ex FR.) PERS.
Edible.

Bo 85 · Beautiful Clavaria
Ramaria formosa (PERS. ex FR.) QUÉL.
Poisonous.

Bo 86 · Peppery Milkcap
Lactarius piperatus (L. ex FR.) S.F. GRAY.
Edible after special treatment.

Bo 87 · Agaricus macros-porus
(MOLL. et SCHFF.) PILÁT. Edible.

Bo 88 · Lingzhi Mushroom
Ganoderma lucidum (CURT. ex FR.) KARST.
Inedible.

Bo 91 · Yellow Stagshorn
Calocera viscosa (PERS. ex FR.) FR.
Inedible.

Bo 92 · Entire Russula
Russula integra L. ex FR.
Good edible mushroom.

Bo 93 · Tall Bog Russula
Russula paludosa BRITZ.
Good edible mushroom.

Bo 94 · Stinking Russula
Russula foetens PERS. ex FR.
Inedible.

Bo 95 · Hollow Bolete
Boletus cavipes (OPAT.) KALCHBR.
Edible.

BoS 96 · Sickener Mushroom
Russula emetica FR. Poisonous.

Bo 97 · Yellow Foot

Cantharellus xanthopus (PERS.) DUBY. Edible.

Bo 98 · Miller Mushroom

Clitopilus prunulus (SCOP. ex FR.) KUMM. Edible.

BoS 99 · Wood Blewit

Lepista nuda (BULL. ex FR.) CKE. Fairly useful for cooking.

Bo 105 · Old Man of the Woods

Strobilomyces floccopus (VAHL ex FR.) KARST. Inedible (bitter).

Bo 106 · Suede Bolete

Xerocomus subtomentosus (L. ex FR.) QUÉL. Edible.

Bo 107 · Mealy Funnel

Clitocybe vibecina (FR.) QUÉL. Edible according to Ricken; should be avoided, however, due to risk of confusion.

Fungi Models

Nature is our Model SOMSO® Modelle

Botany 5

Bo 100 · Dove-Coloured Tricholoma

Tricholoma columbetta (FR.) KUMM. Edible.

Bo 101 · Dryad's Saddle Fungus

Polyporus squamosus HUDS. ex FR. Edible when very young.

Bo 102 · Oak Mazegill

Daedalea quercina L. ex FR. Inedible.

Bo 103 · Giant Leucopax

Aspropaxillus giganteus (SOW. ex FR.) KÜHN. et MRE. Edible.

Bo 104 · Whitelaced Shank

Megacollybia platyphylla (PERS. ex FR.) KOTL. et POUZ. Top edible.

Bo 108 · Parrot Toadstool

Hygrocybe psittacina (SCHFF. ex FR.) WÜNSCHE. Mildly poisonous

Bo 109 · Ochre Brittlegill

Russula ochroleuca PERS. ex FR. Edible when young.

Bo 110 · Boletus Chrysenteron

Xerocomus chrysenteron (BULL. ex ST.-AM.) QUÉL. Edible.

Bo 111 · Grisette

Amanita vaginata (BULL. ex FR.) QUÉL. Edible.

Bo 112 · Crab Brittlegill

Russula xerampelina (SCHFF. ex SECR.), Edible.

Bo 113 · Crab-of-the-Woods

Laetiporus sulphureus (BULL. ex FR.) MURR. Edible when young.

Bo 114 · Hare´s Ear

Otidea onotica (PERS. ex FR.) FUCK. Edible.

Bo 115 · Red-Banded Cortinarius

Cortinarius armillatus (FR. ex FR.) FR. Edible.

Bo 116 · Brown Slimecap

Chroogomphus rutilus (SCHFF. ex FR.) O.K. MILLER. Edible.

Bo 117 · Grey Spotted Amanita Mushroom

Amanita spissa (FR.) KUMM. Edible; great risk of confusion.

Bo 118 · Russula olivacea

(SCHFF. ex SECR.) FR. Edible.

Bo 119 · Orange Webcap

Cortinarius mucosus (BULL. ex FR.) KICKX. Edible.

Bo 120 · Grey Milkcap

Lactarius vietus FR. Not suitable as edible mushroom.

Bo 121 · Veiled Oyster Mushroom

Pleurotus dryinus (PERS. ex FR.) P. KUMM. Edible when young.

Bo 122 · Common Earthball

Scleroderma citrinum PERS. Poisonous.

Bo 123 · Aniseed Cockleshell

Lentinellus cochleatus (PERS. ex FR.) KARST. Edible when young.

BO 131 · PESTLE PUFFBALL

Calvatia excipuliformis (PERS.) PERD. Young Edible.

BO 138 · MEADOW WAXCAP

Camarophyllus pratensis (PERS. ex FR.) KUMM. Edible.

BO 139 · ORANGE PEEL FUNGUS

Aleuria aurantia (PERS. ex FR.) FUCK. Edible.

BO 140 · TAWNY FUNNEL CAP

Lepista inversa (SCOP. ex FR.) PAT. Edible.

BOS 130 · SHAGGY INK CAP

Coprinus comatus (MÜLL. ex FR.) PERS. Edible when young.

BO 124 · SPOTTED TOUGHSHANK

Collybia maculata (A. et S. ex FR.) KUMM. Inedible.

BO 132 · CORTINARIUS CINNAMOMEO-LUTEUS

(ORTON) MOS. Poisonous.

BOS 141 · LURID BOLETE

Boletus luridus SCHFF. ex FR. Partly edible, poisonous when raw.

BO 144 · PAP MILKCAP

Lactarius mammosus FR., Edible, mised mushroom, suitable for pickling in vinegar

BO 125 · OYSTER MUSHROOM

Pleurotus ostreatus (JACO. ex FR.) KUMM. Edible.

BO 133 · DOMECAP MUSHROOM

Lyophyllum fumosum (PERS. ex FR.) ORTON. Edible.

BO 142 · ROOTING BOLETE

Boletus radicans PERS. ex FR. Inedible, but not poisonous.

BO 145 · WOOD MUSHROOM

Agaricus silvicola (VITT.) SACC. Edible.

BO 126 · FENUGREEK MILKCAP

Lactarius helvus FR. Poisonous! Dried in small quantities, condiment mushroom

BO 134 · BLUING BOLETE

Gyroporus cyanescens (BULL. ex FR.) QUÉL. Edible.

BO 143 · SOOTY MILKCAP

Lactarius fuliginosus FR. Edible.

BO 146 · CLUSTERED PSATHYRELLA

Psathyrella hydrophila (BULL ex MÉRAT) MRE. Edible.

BO 127 · BLACKENING BRITTLEGILL

Russula nigricans (BULL.) FR. Inedible.

BO 135 · LEPISTA GILVA

(PERS. ex FR.) ROZE. Edible.

BO 147 · BEEFSTEAK FUNGUS

Fistulina hepatica SCHFF. ex FR. Edible when young.

BO 128 · STRAP CORAL

Clavariadelphus ligula SCHFF. ex FR. Edible, but not very tasty.

BO 136 · SCALY RUSTGILL

Gymnopilus sapineus (FR.) MRE. Inedible.

BO 129 · APRICOT JELLY

Tremiscus helvelloides (DC. ex FR.) DONK. Edible.

BO 137 · YELLOW CORAL MUSHROOM

Ramaria flava (SCHFF. ex FR.) QUÉL. Edible.

Bo 148 · Russet Scaly Tricholoma
Tricholoma vaccinum (PERS. ex FR.) KUMM. Suspicious.

Bo 155 · Spotted Toughshank
Gyromitra infula (SCHFF. ex FR.) QUÉL. Edible.

BoS 156 · Deadly Fibrecap
Inocybe patouillardii BRES. Very poisonous!

Bo 149 · Sessile Earthstar
Geastrum fimbriatum FR. Inedible.

Bo 157 · Blistered Cup Fungus
Peziza vesiculosa BULL. ex FR. Edible.

Bo 150 · Velvet Shank Mushroom
Flammulina velutipes (CURT. ex FR.) SING. Edible.

Bo 158 · A Group of Black Morel
Morchella conica PERS. ex FR. Edible. Comparisons Bo 151

Bo 163 · Rooting Shank Mushroom
Oudemansiella radicata (RELHAN ex FR.) SING. Edible.

Bo 151 · Conic Morel
Morchella conica PERS. ex FR. Edible.

Bo 165 · Golden Coral
Ramaria aurea (SCHFF.) QUÉL. Edible.

BoS 152 · Yellow Morel
Morchella esculenta (L.) PERS. Edible.

BoS 159 · Deadly Fibrecap
Inocybe patouillardii BRES., as BoS 156, but as a group with the 6 most important stages of development. Very poisonous.

Bo 164 · Penny Bun Bolete
Boletus edulis BULL. ex FR. Group of big yellow Boletus. Head diameter 17 cm, Edible. Comparisons BoS 225

Bo 160 · St George's Mushroom
Calocybe gambosa (FR.) DONK. Edible.

Bo 161 · Grass-Green Russula
Russula aeruginea LINDBL. Edible

BoS 153 · Spotted Toughshank
Gyromitra esculenta (PERS. ex. FR.) FR. Poisonous.

Bo 162 · Eastern Flat-topped Agaricus
Agaricus meleagris PECK (J. SCHFF.) Poisonous.

BoS 166 · Devil's Bolete
Huge Specimen, Top diameter 20 cm, Boletus satanas LENZ. Poisonous. Comparisons BoS 53

Bo 154 · White Saddle
Helvella crispa (SCOP.) ex FR. Edible.

Fungi Models

Nature is our Model SOMSO® Modelle

Botany 5

Bo 172 · Stinking Dapperling
Lepiota cristata (BOLTON ex FR.) KUMM. Inedible.

Bo 173 · Clustered Domecap
Lyophyllum decastes (FR.) SING. Edible.

Bo 174 · Contrary Webcap
Cortinarius varius (SCHFF. ex FR.) FR. Edible.

BoS 181 · Pavement Mushroom
Agaricus bitorquis (QUêL) SACC. Edible.

Bo 182 · Portobello Mushroom
Agaricus hortensis (CKE.) PILAT. Edible.

Bo 183 · Hazel Bolete
Leccinum griseum (QUêL.) SING. Edible.

Bo 167 · Torn Fibrecap
Inocybe fastigiata (SCHFF. ex FR.) QUÉL. Poisonous.

Bo 175 · Common Inkcap Mushroom
Coprinus atramentarius (BULL. ex FR.) FR. Young edible, poisonous in combination with alcohol

Bo 184 · Umbrella Polypore Fungus
Polyporus umbellatus (PERS. ex FR.), Edible when young.

Bo 168 · Witch's Hat
Hygrocybe conica (SCOP. ex FR.) KUMM. Edible.

Bo 176 · Verdigris Agaric
Stropharia aeruginosa (CURT. ex FR.) QUÉL. Edible.

Bo 185 · Umbrella Polypore Fungus
Polyporus umbellatus (PERS. ex FR.), Edible when young.

Bo 169 · Rosy Earthstar
Geastrum rufescens (PERS.) FR. Inedible.

Bo 177 · Conifer Tuft Mushroom
Hypholoma capnoides (FR. ex FR.) KUMM. Edible.

Bo 186 · Spindleshank Mushroom
Collybia fusipes (BULL. ex FR.) QUÉL. Inedible.

Bo 190 · Warted Amanita Mushroom
Amanita strobiliformis (PAULET ex VITT.) BERT. Edible.

Bo 170 · Rayed Earthstar
Geastrum quadrifidum PERS. Inedible.

Bo 178 · Tricholoma batschii Gulden.
Slightly poisonous.

Bo 187 · Toothed Jelly Fungus
Pseudohydnum gelatinosum (SCOP. ex FR.) P. KARST. Edible.

Bo 191 · Trooping Funnel Mushroom
Clitocybe geotropa (BULL. ex FR.) QUÉL. Edible when young.

Bo 179 · Fairy Ring Mushroom
Marasmius oreades (BOLT. ex FR.) FR. Edible.

Bo 188 · Spotted Milkcap
Lactarius scrobiculatus (SCOP. ex FR.) FR. Poisonous.

Bo 192 · Sulphur Knight
Tricholoma sulphureum (BULL. ex FR.) KUMM. Slightly poisonous.

Bo 171 · Shaggy Parasol
Chlorophyllum rhacodes (VITT.) YELL. Edible.

Bo 180 · Dyer's Mazegill
Phaeolus schweinitzii (FR.) PAT. Inedible.

Bo 189 · Giant Club Fungus
Clavariadelphus pistillaris (L. ex FR.) DONK. Not palatable.

Bo 193 · Grey Coral
Clavulina cinerea (BULL.) SCHROET. Edible.

BoS 226 · Development of Hat Fungi

Natural size, in **SOMSO-PLAST®**. Submitted to Dr. rer. nat. A. Meixner, graduate chemist and fungi expert, Stuttgart. The mycelium, primordial and egg stages, young and mature fruiting bodies of the following species are shown. On a green base. **Can be separated into 6 parts.** Height: 37 cm, width: 47 cm, depth: 15 cm, weight: 2.8 kg

Fungi Models

Nature is our Model SOMSO® Modelle

Botany 5

Bo 194 · Summer Truffle

Tuber aestivum (VITT.), Edible.

Bo 195 · Soapy Knight Mushroom

Tricholoma saponaceum (FR.) KUMM. Inedible.

Bo 196 · Peppery Bolete

Chalciporus piperatus (BULL. ex FR.) BAT. Edible but in small quantities.

Bo 198 · Butter Cap Mushroom

Rhodocollybia butyracea f. asema (BULL. ex FR.) LENNOX. Edible but not very tasty.

Bo 199 · Stump Puffball

Lycoperdon pyriforme SCHFF. ex PERS. Edible when young.

Bo 200 · Charbonnier

Tricholoma portentosum (FR.) QUÉL. Edible.

Bo 201 · Winter Polypore Fungus

Polyporus brumalis PERS. ex FR. Inedible.

Bo 202 · Wrinkled Club Fungus

Clavaria rugosa BULL. ex FR. Edible.

Bo 203 · Lilac Bonnet Mushroom

Mycena pura (PERS. ex FR.) KUMM. Edible.

Bo 197 · Moor Club Fungus

Clavulinopsis argillacea PERS. ex FR. Edible.

Bo 204 · Bay Cup Fungus

Peziza badia PERS. ex MÉRAT. Edible to a limited degree

Bo 205 · Matt Knight

Tricholoma imbricatum (FR. ex FR.) KUMM. Inedible.

Bo 206 · Herald of Winter

Hygrophorus hypothejus (FR. ex FR.) FR. Edible.

BoS 207 · Fool's Mushroom

Amanita verna (BULL. ex FR.) ROQUES. Deadly poisonous.

BoS 208 · Destroying Angel

Amanita virosa (FR.) BERTILL Deadly poisonous.

Bo 209 · Livid Entoloma

Rhodophyllus sinuatus (BULL. ex FR.) SING., Poisonous.

Bo 210 · Yellow Webcap

Cortinarius delibutus FR. Edible.

Bo 211 · Cortinarius subfulgens

ORTON. Edible.

Bo 212 · Weeping Bolete

Suillus granulatus (L. ex FR.) O. KTZE. Edible.

Bo 213 · Sticky Bolete

Suillus viscidus (L.) ROUSSEL. Edible.

Bo 214 · Birch Webcap

Cortinarius triumphans FR. according to Moser Edible.

Bo 215 · Wood Pinkgill

Entoloma rhodopolium (FR.) NOORDEL. Poisonous

Bo 216 · Upright Coral Fungus

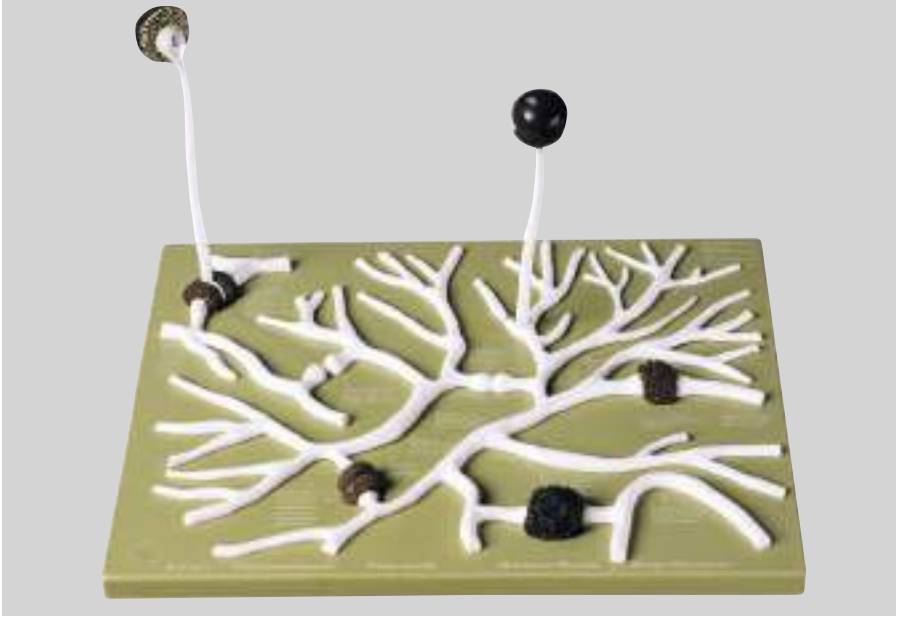
Ramaria stricta (PERS. ex FR.) QUÉL. Inedible.

Bo 217 · White Coral Fungus

Clavulina cristata (HOLMSK. ex FR.) SCHROET. Edible

BoS 14/1 · Common Pinmould

Mucor mucedo, **enlarged approximately 250 times,** in **SOMSO-PLAST®**. According to Prof. Dr. W. Weber. The model shows sexual and asexual reproduction. **Separable into 3 parts.** Mounted on a green board. Height: 18.5 cm,width: 32 cm, depth: 25.5 cm, weight: 600 g



Microscopic Fungi
Fungi Models

Botany 5

Bo 218 · Parasol Mushroom
Macrolepiota procera (SCOP. ex FR.) SING. Stunted form. Edible. Comparisons BoS 45 and BoS 46

Bo 219 · Grey Morel
Morchella vulgaris PERS. Edible.

Bo 220 · Slippery White Bolete
Suillus placidus (BON.) SING. Edible.

Bo 221 · Parasitic Bolete Mushroom
Xerocomus parasiticus (BULL. ex FR.) QUÉL. Edible.

Bo 222 · Caesar's Mushroom
Amanita caesarea (SCOP. ex FR.) PERS. Edible.

BoS 223 · The Flirt
Russula vesca FR. Edible.

BoS 224 · Field Mushroom
Agaricus campestris (L.) FR. Huge specimen, Edible.

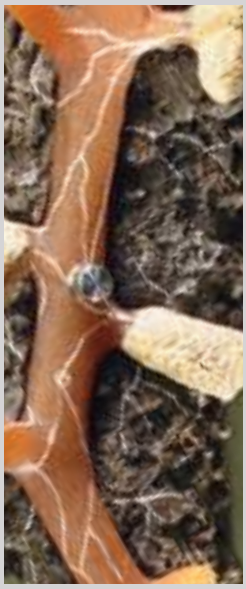
BoS 225 see page 195

BoS 227 · Structure of Hat Fungi

Large model, in **SOMSO-PLAST®.** Submitted to Dr. rer. nat. Axel Meixner, graduate chemist and fungi expert, Stuttgart. The morphological features of all the major varieties of types of hat fungi can be seen on this model which comes in 4 sections. The juxtaposition of the various features on one and the same model not only provides assistance in learning how to identify the different species of mushrooms but also enables direct comparisons to be made between edible mushrooms, for example, and similar-looking poisonous ones. On a green base. Height: 45 cm, width: 40 cm, depth: 32 cm, (cap diameter 35 cm), weight: 5.4 kg

BoS 227

BoS 227 disassembled



BoS 226/1 · Scots Pine Mycorrhiza

Pinus sylvestris. Root section **enlarged approximately 40 times, cross-section enlarged approximately 430 times,** in **SOMSO-PLAST®**. According to Prof. Dr. Weber. **Can be disassembled into two parts** on a green base. Heigth: 13 cm, width: 32 cm, depth: 26 cm, weight: 1.1 kg

Microscopic Fungi
Fungi Models

Nature is our Model SOMSO® Modelle

Botany 5

BoS 225 · Penny Bun Bolete

Boletus edulis (BULL. ex FR.) Group with six different stages of development. Edible. Comparisons BoS 31

BoS 226 see page 193

BoS 227 see page 194

Bo 228 · Royal Fly Agaric

Amanita regalis (FR) MICHAEL. Poisonous.

Bo 229 · Giant Puffball

Langermannia gigantea (Calvatia maxima) (BATSCH ex PERS.) ROSTK. Edible when young.

BoS 230 · Kefir grains

mix of Lactococcus lactis, Kluyveromyces lactis, Candida utilis, Candida kefyr, et al. edible

Bo 231 · Aniseed Toadstool

Clitocybe odora (Bull. ex Fr.) KUMM. Edible.

Bo 232 · Mealy Tooth

Hydnellum ferrugineum (FR. ex FR.) KARST. Inedible, leathery.

Bo 235 · Splendid Webcap

Cortinarius rubellus (MOSER) Deadly poisonous.

Bo 236 · Deadly Webcap

Cortinarius rubellus COOKE Deadly poisonous.

Bo 237 · Bluing Bolete

Gyroporus cyanescens (BULL. ex FR.) QUÉL. Edible.

Bo 238 · Sunset Webcap

Cortinarius limonius FR. ex FR. Poisonous

Bo 239 · Saffron Webcap

Cortinarius croceus SCHFF. ex. FR. Poisonous

Bo 240 · Purple Stocking Webcap

Cortinarius stillatitius. FR. Edible.

Bo 241 · Tawny Funnel

Lepista flaccida (SOWERBY ex FR.) PAT. Edible.

BoS 242 see page 196

Bo 243 · Octopus Stinkhorn

Clathrus archeri (BERK.) DRING Inedible.

BoS 244 · Porcelain Fungus

Oudemansiella mucida, (SCHRAD. ex FR.) HOEHN. Edible after it has been washed thoroughly, but it is not a valuable edible mushroom (see catalogue page 185)

SOMSO® offers a comprehensive range of Fungi Models

Fungi Models

Nature is our Model SOMSO® Modelle

Botany 5

Bo 242 · Octopus Stinkhorn
Clathrus archeri, Group. (BERK.) DRING. Inedible.

A
Bo 158 A group of Black Morel
Bo 87 Agaricus macrosporus
Bo 64 Albatrellus confluens
Bo 90 Albatrellus pes-caprae
Bo 80 Amethyst Deceiver
Bo 123 Aniseed Cockleshell
Bo 231 Aniseed Toadstool
Bo 129 Apricot Jelly

B
BoS 43 Bay Bolete
Bo 204 Bay Cup Fungus
Bo 85 Beautiful Clavaria
Bo 147 Beefsteak Fungus
Bo 82 Birch Polypore
Bo 214 Birch Webcap
Bo 77 Bitter Beech Bolete
BoS 34 Bitter Bolete
Bo 127 Blackening Brittlegill
Bo 157 Blistered Cup Fungus
Bo 134 Bluing Bolete
Bo 237 Bluing Bolete
BoS 40 Blusher
Bo 110 Boletus Chrysenteron
Bo 70 Bovine Bolete
Bo 50 Brick Cap
BoS 39 Brown Roll-Rim
Bo 116 Brown Slimecap
Bo 89 Butter Bolete
Bo 198 Butter Cap Mushroom

C
Bo 222 Caesar's Mushroom
BoS 79 Cauliflower Fungus
BoS 28 Chanterelle
Bo 200 Charbonnier
Bo 74 Clouded Funnel Mushroom
Bo 173 Clustered Domecap
Bo 146 Clustered Psathyrella
Bo 122 Common Earthball
BoS 56 Common Earthball
Bo 175 Common Inkcap Mushroom
BoS 14/1 Common Pinmould
BoS 57 Common Puffball
BoS 61 Common Stinkhorn
Bo 151 Conic Morel
Bo 177 Conifer Tuft Mushroom
Bo 174 Contrary Webcap
Bo 132 Cortinarius cinnamomeoluteus
Bo 211 Cortinarius subfulgens
Bo 112 Crab Brittlegill
Bo 113 Crab-of-the-Woods

D
BoS 156 Deadly Fibrecap
BoS 159 Deadly Fibrecap
Bo 236 Deadly Webcap
BoS 23 Death Cap
BoS 25 Death Cap
BoS 208 Destroying Angel
BoS 226 Development of Hat Fungi
BoS 166 Devil's Bolete
BoS 53 Devil's Bolete
Bo 133 Domecap Mushroom
Bo 84 Dotted Stem Bolete
Bo 100 Dove-Coloured Tricholoma
Bo 101 Dryad's Saddle Fungus
Bo 180 Dyer's Mazegill

E
Bo 162 Eastern Flat-topped Agaricus
Bo 92 Entire Russula

F
Bo 179 Fairy Ring Mushroom
BoS 49 False Chanterelle
BoS 66 False Death Cap
Bo 126 Fenugreek Milkcap
BoS 60 Field Blewit
BoS 26 Field Mushroom
BoS 224 Field Mushroom
Bo 32 Fleecy Milkcap
BoS 41 Fly Agaric
BoS 78 Forest Lamb
BoS 207 Fool's Mushroom

G
Bo 42 Gassy Webcap
Bo 189 Giant Club Fungus
Bo 103 Giant Leucopax
Bo 229 Giant Puffball
Bo 165 Golden Coral
Bo 161 Grass-Green Russula
BoS 71 Greville's Bolete
Bo 193 Grey Coral
Bo 33 Grey Knight
Bo 219 Grey Morel
Bo 117 Grey Spotted Amanita Mushroom
Bo 120 Grey Milkcap
Bo 111 Grisette
BoS 55 Gypsy Mushroom

H
Bo 114 Hare´s Ear
Bo 183 Hazel Bolete
Bo 206 Herald of Winter
Bo 95 Hollow Bolete
BoS 62 Honey Fungus
BoS 24 Honey Fungus
BoS 59 Horn of Plenty
BoS 44 Horse Mushroom

K
BoS 230 Kefir grains

L
Bo 135 Lepista gilva
Bo 203 Lilac Bonnet Mushroom
Bo 88 Lingzhi Mushroom
Bo 209 Livid Entoloma
BoS 141 Lurid Bolete

M
Bo 205 Matt Knight
Bo 138 Meadow Waxcap
Bo 107 Mealy Funnel
Bo 232 Mealy Tooth
Bo 98 Miller Mushroom
Bo 197 Moor Club Fungus

O
Bo 102 Oak Mazegill
Bo 109 Ochre Brittlegill
Bo 242 Octopus Stinkhorn
Bo 243 Octopus Stinkhorn
Bo 105 Old Man of the Woods
BoS 20 Orange Bolete
Bo 119 Orange Webcap
Bo 139 Orange Peel Fungus
Bo 125 Oyster Mushroom

P
BoS 72 Panther Cap
Bo 144 Pap Milkcap
Bo 221 Parasitic Bolete Mushroom
Bo 218 Parasol Mushroom
BoS 45 Parasol Mushroom
BoS 46 Parasol Mushroom
Bo 108 Parrot Toadstool
BoS 181 Pavement Mushroom
Bo 164 Penny Bun Bolete
BoS 225 Penny Bun Bolete
BoS 31 Penny Bun
Bo 196 Peppery Bolete
Bo 86 Peppery Milkcap
Bo 131 Pestle Puffball
Bo 37 Pig's Ear
Bo 27 Plums and Custard
BoS 244 Porcelain Fungus
Bo 182 Portobello Mushroom
Bo 30 Primrose Brittlegill
Bo 240 Purple Stocking Webcap

R
Bo 76 Ramaria mairei
Bo 170 Rayed Earthstar
Bo 115 Red-Banded Cotinarius
Bo 169 Rosy Earthstar
BoS 228 Royal Fly Agaric
Bo 163 Rooting Shank Mushroom
Bo 142 Rooting Bolete
BoS 68 Rough-Stemmed Bolete
Bo 35 Rufous Milkcap
Bo 148 Russet Scaly Tricholoma
Bo 118 Russula olivacea

S
BoS 51 Saffron Milkcap
Bo 239 Saffron Webcap
Bo 136 Scaly Rustgill
Bo 67 Scaly Wood Mushroom
BoS 226/1 Scots Pine Mycorrhiza
Bo 149 Sessile Earthstar
BoS 130 Shaggy Ink Cap
Bo 171 Shaggy Parasol
Bo 81 Shaggy Scalycap
BoS 63 Sheathed Woodtuft
BoS 54 Shingled Hedgehog
BoS 96 Sickener Mushroom
Bo 69 Slimy Spike Cap
BoS 36 Slippery Jack
Bo 220 Slippery White Bolete
Bo 195 Soapy Knight Mushroom
Bo 143 Sooty Milkcap
Bo 186 Spindleshank Mushroom
Bo 235 Splendid Webcap
Bo 188 Spotted Milkcap
Bo 124 Spotted Toughshank
Bo 155 Spotted Toughshank
BoS 153 Spotted Toughshank
Bo 160 St George's Mushroom
Bo 213 Sticky Bolete
Bo 172 Stinking Dapperling
Bo 94 Stinking Russula
Bo 128 Strap Coral

S
BoS 227 Structure of Hat Fungi
Bo 199 Stump Puffball
Bo 106 Suede Bolete
Bo 192 Sulphur Knight
Bo 75 Sulphur Tuft
Bo 194 Summer Truffle
Bo 238 Sunset Webcap
Bo 65 Sweet Tooth

T
Bo 93 Tall Bog Russula
Bo 241 Tawny Funnel
Bo 140 Tawny Funnel Cap
BoS 223 The Flirt
Bo 187 Toothed Jelly Fungus
Bo 167 Torn Fibrecap
Bo 178 Tricholoma batschii
Bo 191 Trooping Funnel Mushroom
Bo 58 Trumpet Chanterelle Mushroom

U
Bo 83 Ugly Milkcap
Bo 184 Umbrella Polypore Fungus
Bo 185 Umbrella Polypore Fungus
Bo 216 Upright Coral Fungus

V
Bo 121 Veiled Oyster Mushroom
BoS 47 Velvet Bolete
Bo 38 Velvet Roll-Rim
Bo 150 Velvet Shank Mushroom
Bo 176 Verdigris Agaric

W
Bo 190 Warted Amanita Mushroom
Bo 212 Weeping Bolete
Bo 73 Weeping Milk Cap
Bo 217 White Coral Fungus
Bo 154 White Saddle
Bo 104 Whitelaced Shank
Bo 201 Winter Polypore Fungus
Bo 168 Witch's Hat
BoS 99 Wood Blewit
Bo 145 Wood Mushroom
Bo 215 Wood Pinkgill
BoS 52 Woolly Milkcap

Y
Bo 137 Yellow Coral Mushroom
Bo 97 Yellow Foot
BoS 48 Yellow Knight
BoS 152 Yellow Morel
Bo 91 Yellow Stagshorn
Bo 210 Yellow Webcap

On request, SOMSO®
is able to offer an extensive
programme of further fruit
models and artificial
reproductions of foods.

Fruit Models

Nature is our Model SOMSO® Modelle

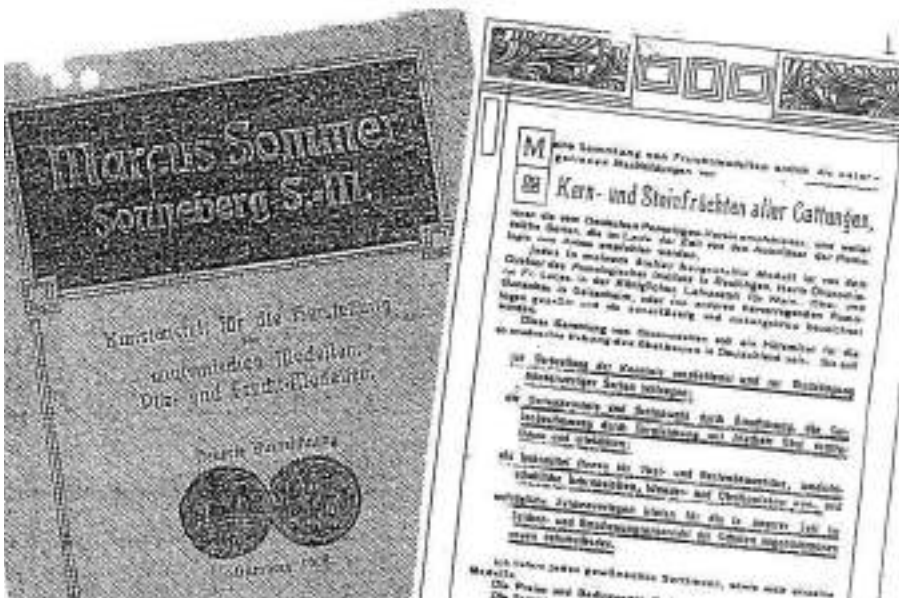
Botany 6

Extract of the catalogue by company Marcus Sommer Sonneberg S.-M. Art Institution for the Manufacture of Anatomical Models, Fungi and Fruit Models from 1909

Fruit Models

Nature is our Model SOMSO® Modelle

Botany 6



03/7 · Malus Sylvestris

03/12 · Freiherr von Berlepsch

03/16-1 · Siebenschlaefer with thick stem

03/21 · Boskoop Red

03/8 · Crab Apple

03/13 · Geheimrat Dr. Oldenburg

03/17 · Jakob Fischer

03/22 · Reinette Rouge Etoilee

03/9 · Siberian crabapple

03/14 · Blenheim Orange

03/18 · Jonathan

03/23 · Belle de Boskoop

03/10 · Cox's Orange Pippin with thick stem

03/15 · Gravenstein

03/19 · Kaiser Wilhelm

03/24 · Wiltshire Beauty

03/11 · Cox's Orange Pippin without thick stem

03/16 · Siebenschlaefer

03/20 · Rheinischer Winterrambur

03/25 · King of the Pippins

SOMSO® has now added traditional meadow orchard fruit types to their historical, pomological fruit collection.

"Nature is our model" - this is the guiding idea for the realistic representation of nature as the model.

SOMSO® looks back on a long-standingtradition of manufacturing models from papier maché. Ina and Anne Sommer, members of the 5th generation of the entrepreneurial family, arereviving the traditional manufacturing method by manufacturing the "SOMSO® Apple".

Fruit Models

Nature is our Model SOMSO® Modelle

Botany 6

03/26 · Calville Blanc d'Hiver

03/27 · White Transparent

03/28 · Golden Noble

03/29 · Ontario

03/30 · Baumann's Reinette

03/31 · Landsberger Reinette

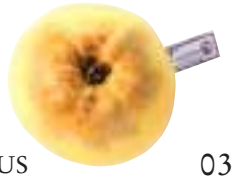
03/32 · Canadian Reinette

03/33 · Harberts Reinette

03/34 · Zabergaeu Renette

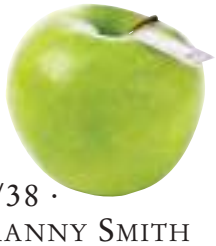
03/35 · Adersleber Calville

03/36 · Golden Delicious



03/36-1 · Golden Delicious
WITH SKIN BURNING

03/37 · Manga



03/38 · Granny Smith

03/38-1 · Granny Smith
WITH USUAL SCALD

03/38-2 · Granny Smith
WITH SUNSCALD

03/38-3 · Granny Smith
WITH SUNBURN

03/38-4 · Granny Smith
WITH DIFFUSE SKIN BROWNING

03/40 · Danziger Kantapfel

03/41 · Idared

03/48 · Gacksapfel

Fruit Models

Nature is our Model SOMSO® Modelle

Botany 6

The apple cultivar "Gacksapfel" as a fruit model
SOMSO® Modelle: Living tradition for more than 140 years.

For more than 140 years, pomological fruit models have been manufactured in the SOMSO® workshops in Coburg and Sonneberg. The company can look back on a great tradition of manufacturing models from papier maché. Each individual fruit variety is created based on our old, in-house recipes and by manually creating every individual piece, which includes steps such as pressing, retouching, painting, and decorating with wax.

True to the motto "Nature is our Model", the result is a maximum of true-to-life representation and an aesthetic highlight for every decorative display.

From 1880 onwards, Marcus Sommer senior manufactured an extensive range of fruit models – in consultation with the Deutscher Pomologenverein [German Pomological Society] of that time. In the meantime, the company has expanded its collection by adding meadow orchard fruit varieties. Today's pomological society, Pomologen-Verein e.V., has also adopted the SOMSO® range of products and has full-scale models made, for example local Hessian varieties such as the apple cultivars "Gacksapfel", "Heuchelheimer Schneeapfel", or "Siebenschläfer".

The "Gacksapfel" models of this exhibition were made in April/May 2015, taking into consideration the colour variance according to the presented sample fruits. These came from the former garden in Bachstraße 23 / Neuer Weg in Wendorf.

Article about the manner of preparation of the local Hesse cultivar of the year 2006, written by Mr Steffen Kahl of the Pomologen-Verein e.V. [Pomological Society].

03/42 · Ausbacher Roter

03/43 · Prinzenapfel

03/44 · Anhalter

03/45 · Vaterapfel without thick stem

03/45-1 Vaterapfel with thick stem

03/46 · Kloppenheimer Streifling

03/47 · Dorheimer Streifling

03/50 · Ananas Reinette

03/51 · Champagne Reinette

03/52 · Roter Stettiner

03/53 · Maigold

03/54 · Api

03/55 · Braeburn

03/56 · Elstar

03/57 · Fuji

03/58 · Gala-Tenroy-Royal Gala®

03/59 · Scifresh-Jazz®

03/60 · Nicoter-Kanzi®

03/61 · CIVG 198-Modi®

03/62 · Cripps Pink-Pink Lady®

Living tradition

Creating a model of an apple involves delicate hand work and single piece production. Biological Model Maker Hanno Klug painting an apple.

This interaction of all the work processes results in a true-to-life representation and an aesthetic highlight for every decorative display. The range of papier maché fruits is being expanded.

Fruit Models

Nature is our Model SOMSO® Modelle

Botany 6

03/63 · Pinova

03/64 · Civni Rubens®

03/65 · Topaz

03/66 · Pilot

03/67 · Red Delicious

03/67-1 · Red Delicious
with extensive bitter pit

03/68 · Edelroter

03/69 · Annurca

03/70 · Hoary Morning

03/71 · Gloster

03/72 · Jonagold

03/73 · Meran

03/74 · Minister v. Hammerstein

03/75 · Rosa del Caldaro

03/76 · Stone Pippin

03/77 · Tiroler Spitzlederer

03/78 · Delicious

03/79 · Rosmarina Bianca

03/80 · Stayman Winesap

03/81-1 · Geflammter Kardinal - wide shape

Fruit Models

Nature is our Model SOMSO® Modelle

Botany 6

03/85 · Heuchelheim Snow Apple

03/85-1 · Heuchelheim Snow Apple – stem half

03/85-2 · Heuchelheim Snow Apple – calyx half

03/81-2 · Geflammter Kardinal - elongated shape

03/82 · Professor Paulsen

03/83 · Moringer Rosenapfel

03/84 · Spitzrabau

03/90 · Alexander Apple

03/91 · Rheinischer Bohnapfel

03/92 · Zuccalmaglio's Reinette

03/93 · Delbarestivale

03/94 · Ditzels Rosenapfel

03/95 · Koerler Edelapfel

03/96 · Reinette de Metz

03/97 · Gestreifter Matapfel

03/98 · Weilburger

03/100 · Eifeler Rambur

03/101 · Luxemburger Renette

03/102 · Rheinische Schafsnase

03/103 · Tare de Ghinda

03/104 · Roter Bellefleur

03/105 · Roter Eiserapfel

03/106 · Reinette Grise

Günther Volk, Biological Model Maker, shown here creating an apple made from papier maché

Carola Behrens, Biological Model Maker, examining a new apple model based on original templates

Each individual apple is created based on our traditional, in-house recipes. Every individual piece is made by hand, which includes steps such as pressing, retouching, painting, and decorating with wax.

Fruit Models

Nature is our Model SOMSO® Modelle

Botany 6

03/107 · Graue Herbstrenette

03/108 · Purpurroter Cousinot

03/109 · Roter Trierer Weinapfel

03/110 · Creo variety

03/111 · Uhlhorns Augustkalville variety

03/113 · Api Etoile

03/114 · Ruhm aus Kelsterbach

03/115 · Totenapfel von Hellikon

03/116 · Kuetiger Dachapfel

03/117 · Yellow Bellflower

08/10 · Beurre Hardy

08/11 · Fondante de Charneu

08/12 · Abbé Fétel

08/13 · Comtesse de Paris

08/14-1 · Dycker Schmalzbirne, yellow-brown

08/14-2 · Dycker Schmalzbirne, brown (without ill.)

08/15 · Ornamental Pear

08/16-1 · Pyrus pyraster, green

08/16-2 · Pyrus pyraster, yellow

Since the traditional manufacturing of SOMSO® Fruit Models was resumed, the pertinent assessment and advisory services have been provided by renowned pomologists Klaus Schuh and Steffen Kahl, who are held in high esteem by experts.

Fruit Models

Nature is our Model SOMSO® Modelle

Botany 6

Winter 2014 - Steffen Kahl in front of an apple tree

Klaus Schuh on the pomologists' meadow of the Ostheim municipality near Bad Nauheim

08/17-1 · Gewuerzbirne Muehlenbach
GREEN

08/17-2 · Gewuerzbirne Muehlenbach
RIPELY (WITHOUT ILL.)

08/17-1

08/18-1 · Honey pear
GREEN

08/18-2 · Honey pear
RIPELY (WITHOUT ILL.)

08/18-1

08/19-1 · Puspas-birne
GREEN

08/19-2 · Puspasbirne
RIPELY (WITHOUT ILL.)

08/19-1

08/20-1 · Huetjans-birne
GREEN

08/20-2 · Huetjansbirne
RIPELY (WITHOUT ILL.)

08/20-1

Overview of the SOMSO® Fruit Models in alphabetical order.

The new model series of micro organisms is being developed in co-operation with Professor Dr. Uwe Hoßfeld, Biology Education Group at the Biological Pharmaceutical Faculty of the Friedrich Schiller University of Jena.

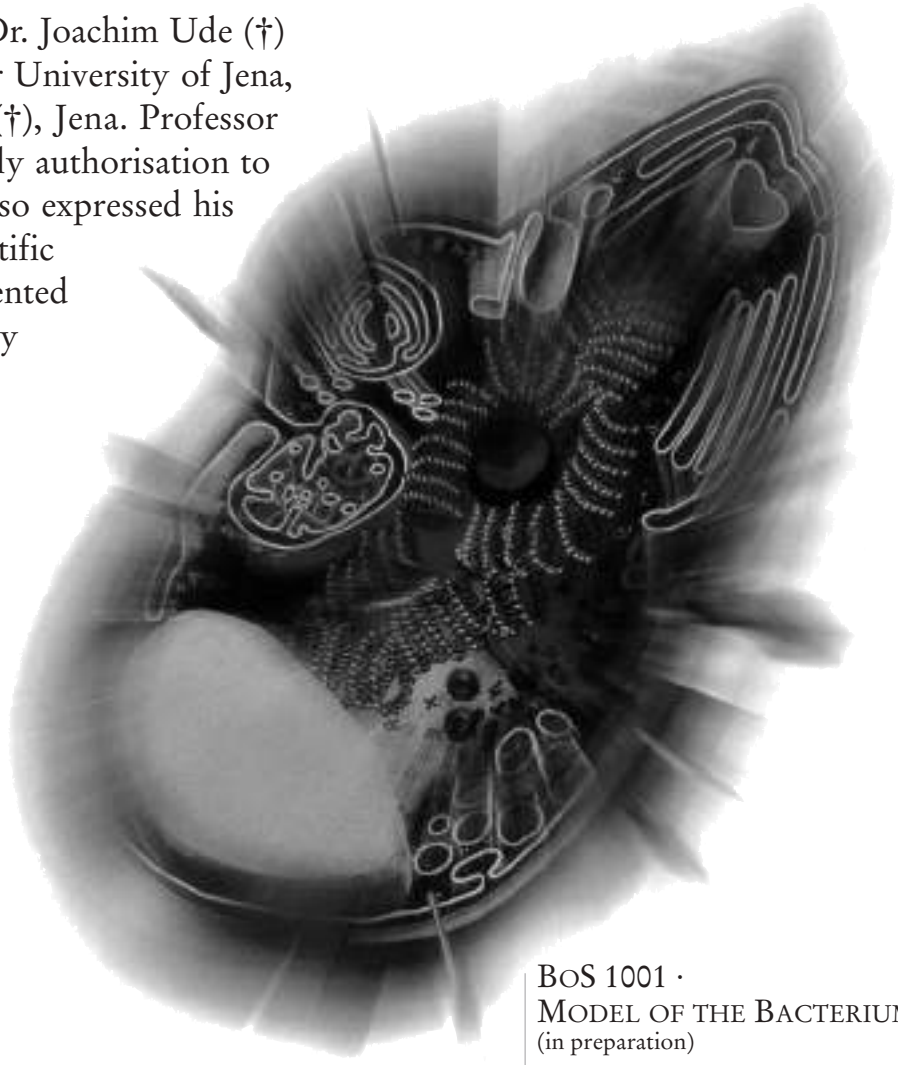
Biology Education Group at the Friedrich Schiller University of Jena

Microorganisms

Nature is our Model SOMSO® Modelle

Botany 7

The model of the bacterium is based on a drawing by Professor Dr. Joachim Ude (†) of the Friedrich Schiller University of Jena, and Dr. Michael Koch (†), Jena. Professor Ude has given thankfully authorisation to use said drawing. He also expressed his happiness that his scientific work is being supplemented in professional circles by the SOMSO® Modelle.



BoS 1001 ·
Model of the Bacterium
(in preparation)

Scale 1 : 10.000, in **SOMSO-PLAST®.**
After Prof. Dr. Joachim Ude, and Dr. Michael Koch, Jena, and in co-operation with Professor Dr. Uwe Hoßfeld, Biology Education Group at the Friedrich Schiller University of Jena. On a stand with green base. Height 38 cm, width 18 cm, depth 26 cm, weight 1.5 kg

Photo of the 300th export delivery with company boss Fritz Sommer, surrounded by his employees

The Somso® history at a glance

17th July 1876:
Foundation of the company in Sonneberg, Thuringia, by Marcus Sommer Snr
Born: 14th November 1845
Died: 21st January 1899

17.07.1876

In Sonneberg, Marcus Sommer begins the production of anatomical teaching models made of papier maché.

1876

Around 1880:
A comprehensive collection of fruit models produced, in agreement with the German Pomological Society

1880

Development of a collection of artifical fungi models - with more than 200 species today.

1890

1st January 1895:
Fritz Sommer, born 27th December 1879, inherits his father's business.
Died: 29th September 1934

1895

Production of an extensive range of heat-resistant moulages in co-operation with university institutes in Jena.

1900

Start of the scientific collaboration with and consultation by Paul Hagedorn, Principal Preparator at the Anatomical Institute in Leipzig.

1911

Marcus Sommer Jnr acquires a new customer in England: Messrs Adam,Rouilly, with whom SOMSO® have had an excellent business relationship since 1927.

1927

15th April 1929:
Modeller, Max Doehler, born 13th June 1905 in Schalkau joins the company. During his 52 years with the company, the range of anatomical, zoological and botanical SOMSO® Modelle is extended and improved

1929

1st April 1930:
Acquisition of Coburger Lehrmittel-Anstalt from Max Albert Sommer, Neuses, Coburg

1930

After the death of her husband Fritz Sommer, Ida Sommer manages the company as a partner until the confiscation in 1952.
Born: 18th January 1882
Died: 10st August 1959

1934

12th October 1936:
Purchase and take-over of the Dr. h. c. Friedrich Ziegler Studio for Scientific Plastics, Freiburg in Breisgau

1936

Ancestral portraits, from left to right: Lotte Sommer, Marcus Sommer Jnr, Rosalie Sommer, Marcus Sommer Snr (founder), Ida Sommer, and Fritz Sommer in the executive office in Coburg-Neuses

From November 1936, production and distribution of the thoroughbred animal statuette collection by Max Landsberg and C.A. Brasch.

1936

1st January 1937: Marcus Sommer Jnr, born on 25th February 1907, becomes partner and managed the company until he died on 26th December 1986.

1937

Willy Schaerf joins the company as authorised signatory and is co-responsible for the progress of the company until 1971.

1947

21st June 1948: After the war, production of the original SOMSO® Modelle starts in Coburg.

1948

18th December 1952: Take-over of Messrs Marcus Sommer, Sonneberg, Thuringia. The property is expropiated and becomes a state-owned company.

1952

Modeller Edgar Froeber, born 6th October 1919, joins the company. During his 40 years with the company, he plays a significant role in Coburg. Creating a large number of botanical and zoological SOMSO® Modelle.

1952

25th March 1954: Re-introduction of the old company name Marcus Sommer, SOMSO-Werkstaetten in Coburg

1954

Richard Schott joined the company; on 20th March 1990, he was granted power of procuration with sole signature rights.
Born: 20th March 1940
Died: 26th July 2002

1954

Start of the collaboration with the printing house Edmund Blümig, which has been managed by Gerhard Blümig, Master Printer, since 1st January 1978, within the frame-work of printing the specifications for the SOMSO® Modelle.

1955

1st August 1957 Karin Wagner joined the company; she is head of the accounting department until 31st December 2004
Born: 1st October 1943
Died: 25th October 2011

1957

Start of the scientific consultation by Christian Gross, Director of Studies from Dillingen, in the area of zoological models and the development of a new series of true-to-life animal sculptures.

1958

17th November 1960: The start of the first stage of construction of the premises in Coburg-Neuses

1960

Collage of the development of the registered figurative mark of the SOMSO® Sun.

The SOMSO® history at a glance

Dr. Lothar Härer, lawyer and auditor, starts advising us in business and legal matters

1962

1st September 1963 Hans Sommer, born on 18th December 1944, joins the company

1963

Start of the scientific consultation by Professor Dr. Walter Jung of the Institute of Palaeontology and Historical Geology of the University of Munich, within the framework of developing botanical models

1963

Collaboration with the Bavarian State Collection of Zoology, Munich

1966

Collaboration with Dr. Eberhard Schicha. Development of insect models

1966

Biological Model Maker Gerhard Weber, born on 10th November 1919, provides excellent services over 33 years as Head of the Painting Department and modeller.

1967

The entire Sommer family, Marcus and Lotte Sommer with their children Traute and Hans Sommer, work at the company.

1968

8th September 1971: Foundation of the company Coburger Lehrmittelanstalt. Manufacturing of the CLA Training Phantoms, which are responsibly designed by the biological model makers Dietrich Krauß (who joined the company on 1st August 1955) and Rudolf Galle (who joined the company on 1st August 1968) (see reference on page 209).

1971

Start of the collaboration with the graphic designer Georg Fickenscher, who died 2017, within the framework of designing the SOMSO® and CLA® advertising campaigns.

1973

Start of the scientific consultation by Professor Dr. med Dr. med h.c. Johannes W. Rohen, Anatomical Institute of the University of Erlangen for anatomical models and the development of a new series of dismantled models of the skull and the brain

1974

Collaboration with Professor Dr. Christian Vogel and afterwards with Professor Dr. Hartmut Rothe, Institute of Anthropology, University of Göttingen

1974

Start of the collaboration with Achim Bühler, industrial and advertising photographer, within the framework of the photographic design of SOMSO® Modelle and CLA® Phantoms

1975

Since 1971 the SOMSO® range of anatomical, zoological and botanical models has been supplemented with a range of medical phantoms manufactured by the sister company CLA® - Coburger Lehrmittelanstalt.

CLA®

The Philosophy
The aim of CLA® is to make teaching aids available for health education. These teaching aids contribute to the training of nursing personnel and doctors. CLA® offers an extensive range of high-quality products for this purpose.

The History
8th September 1971: Foundation of the company Coburger Lehrmittelanstalt, Trade Register No. 2220
1st January 1975
Takeover of commercial operation of the Federal Centre for Health Education in Cologne

Start of the collaboration with Professor Dr. med. John A. Nakhosteen within the framework of developing thorax models and medical training phantoms.

1977

Start of the collaboration with Professor Dr. Wilhelm Weber, Reutlingen, in the development of botanical models.

1980

Since 1988, SOMSO® Modelle have been advertised under the slogan "Nature is our Model" (photo: Rudi Schumann, an exceptional painter for over 36 years).

1988

Start of the scientific consultation by Professor Dr. Helmut Waibl, Director Emeritus of the Institute of Anatomy at the University of Veterinary Medicine Hanover, within the framework of developing SOMSO® Modelle for veterinary medicine

1988

2nd January 1990 - After 40 years, Dorothea, Hans, and Louis-Benedikt Sommer visit the expropriated parent company in Sonneberg/Th. for the first time - production is resumed - retransfer on 18th December 1992.

1990

Scientific co-operation commences with Professor Dr. med. Wolfgang Schmidt and Dr. med. Werner Scheller, Anatomical Institute, University of Leipzig.

1993

Start of the consultation by Mrs Petra Fischer, Head School Nurse of the Leipzig Medical School, in the areas of baby care and paediatric nursing care

1993

29th April to 15th October 1999: Special exhibition in the Deutsches Museum, Munich: "Medical-biological Models made in Plastic"

1999

The company is run by the fourth and fifth generation of the Sommer family. Anne, Louis-Benedikt, Ina, and Petra Sommer with Dorothea and Hans Sommer

2001

17th July 2001: 125th Anniversary of SOMSO® Modelle

2001

17th July 2001 Opening of the SOMSO® MUSEUM at the parent company in Sonneberg, Thuringia

2001

Karl Meixner starts providing us with commercial and general advice, following his 50-year career as an officer with statutory authority at the Deutsche Bank AG.

2001

The Somso® history at a glance

Nature is our Model SOMSO® Modelle

Marcus Sommer Somso Modelle GmbH

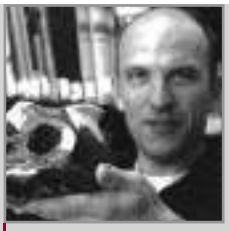
Conversion of the legal form of the company to GmbH (Limited Liability Company)
With this change, the fifth generation are now partners and the tradition of familiy business, established in 1876, can continue.

Petra, Ina, Anne, and Louis-Benedikt Sommer with Hans Sommer

1st January 2007

4th May to 7th October 2012: Exhibition "Leonardo da Vinci: Anatomist" – The Queen's Gallery, Buckingham Palace

2012



Start of the scientific consultation by Professor Dr. Uwe Hoßfeld of the Didactics of Biology research group at the Friedrich Schiller University of Jena, within the framework of developing biological models

2013

1st August 2015: 60-year anniversary of Dietrich Krauß, Biological Model Maker

2015

1st August 2016: 60-year anniversary of Hanno Klug, Biological Model Maker

2016

Jenny and Michael Whitebread, owners of company Adam,Rouilly - customers of SOMSO® Modelle since 1927 - celebrate their 100th Anniversary 19th October 2018

2017

As of 2017, the 5th generation, represented by Managing Director Dipl.-Betriebswirt (FH) Louis-Benedikt Sommer, has been more and more taking over responsibility for the day-to-day business from his father, Managing Director Hans Sommer.

2017

Publication of the main catalogue A 77 as well as of the special catalogues A77/1 Anatomy and A77/2+3 Zoology + Botany

2018

Legal notice:

Design:
OnLein GmbH, Hof and SOMSO® Advertising Department

Print and binding:
PRINTit GmbH, Hof

Photography:
Bühler Concept Visuell, Küps, and SOMSO® photo archive

Digital image processing:
Meyle + Müller, Pforzheim

Translations: Stephanie Braun, Lohr am Main, and SOMSO® text archive