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Sarsaparilla
to
Sorcery

JEFF GIBSON

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FINE ART

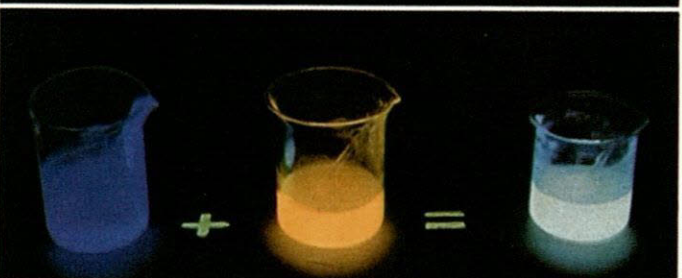
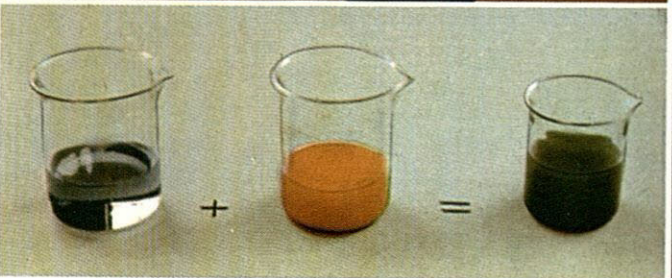
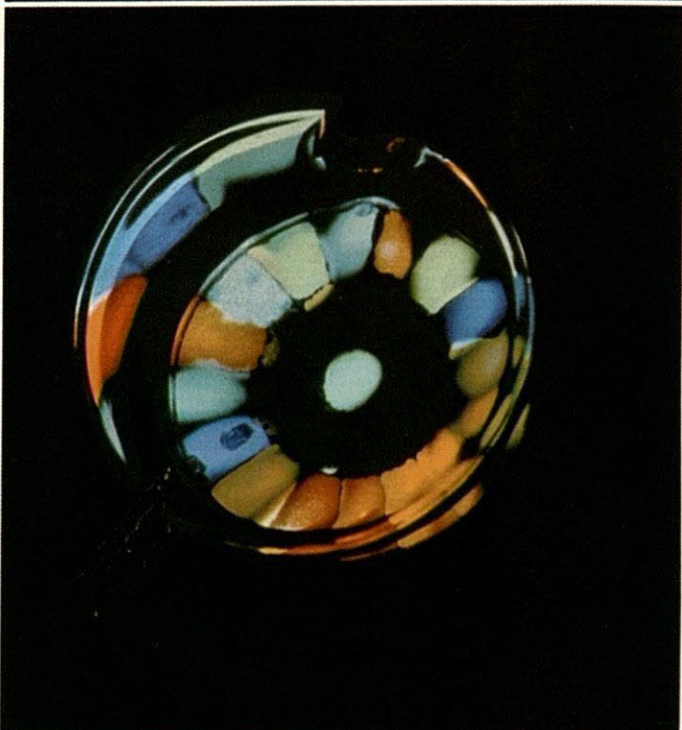
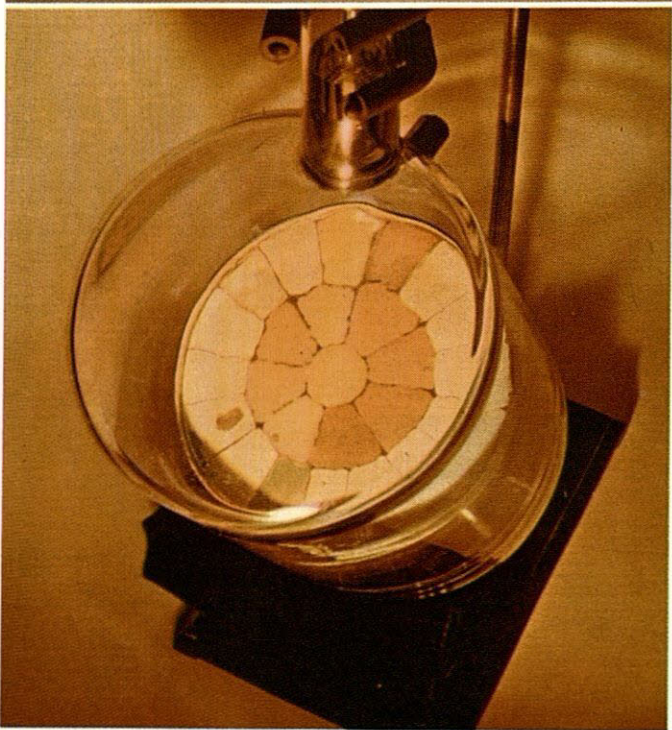
SARSAPARILLA TO SORCERY
JEFF GIBSON

Sarsaparilla
to
Sorcery

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BINGHAMTON UNIVERSITY
STATE UNIVERSITY OF NEW YORK



PHOTOGRAPHS, ANDREAS FEININGER, "LIFE," © 1945 TIME INC.

EXCITATION OF LUMINESCENT MATERIALS

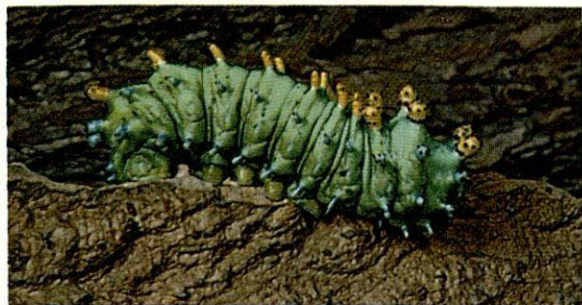
Top: Luminescent minerals and synthetic microcrystalline phosphors under (left) white light and (right) ultraviolet radiation in a dark room. Most useful phosphors simply reflect white light, but absorb ultraviolet rays and generate light with a colour that is determined by the composition of the phosphor. Phosphor crystals in the centre row of vials are zinc-cadmium sulfides with 0.01% silver activator. As the proportion of cadmium is changed from zero to 100%, the luminescent colour changes from blue to red. The phosphors in the trays below are zinc-beryllium silicates with manganese activator. As the proportions of beryllium and manganese are increased, the luminescent colour changes from green to red. Duration of phosphorescence (afterglow) also varies with composition.

Centre: Patches of synthetic microcrystalline phosphors on a plate in an evacuated cathode-ray tube under (left) white light and (right) under a beam of 12,000 volt electrons from an electron gun. The electron beam was deflected from patch to patch on the outer circle by manually rotating a bar magnet near the neck of the tube. When the magnet was removed, the beam struck the centre patch.

Bottom: Left, separate pigments or dyes that selectively reflect blue and yellow light from incident white light provide a mixture that reflects green light. Right, separate phosphors that emit blue and yellow light under ultraviolet irradiation, in a dark room, provide a mixture that emits white light.







Caterpillar of the cynthia moth. See picture and caption at right



Larva of *Charaxes* species (family Nymphalidae), a large African butterfly



Cynthia moth, *Samia cynthia*, family Saturniidae, resting on a flower just after emerging from its cocoon. The wings have not yet fully opened



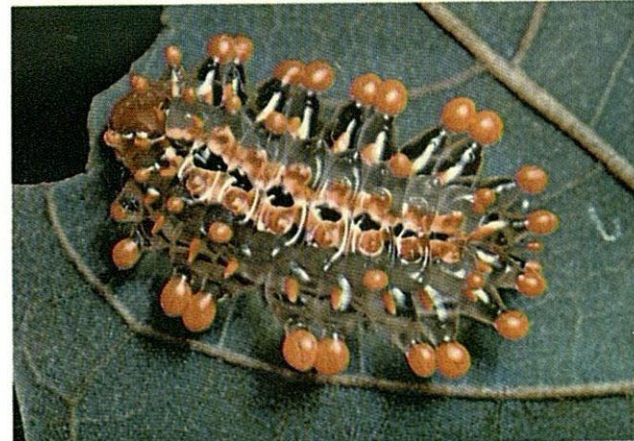
Red caterpillar of Peru. The hairs on this larva are poisonous



Caterpillar of the polyphemus moth (*Antheraea polyphemus*)



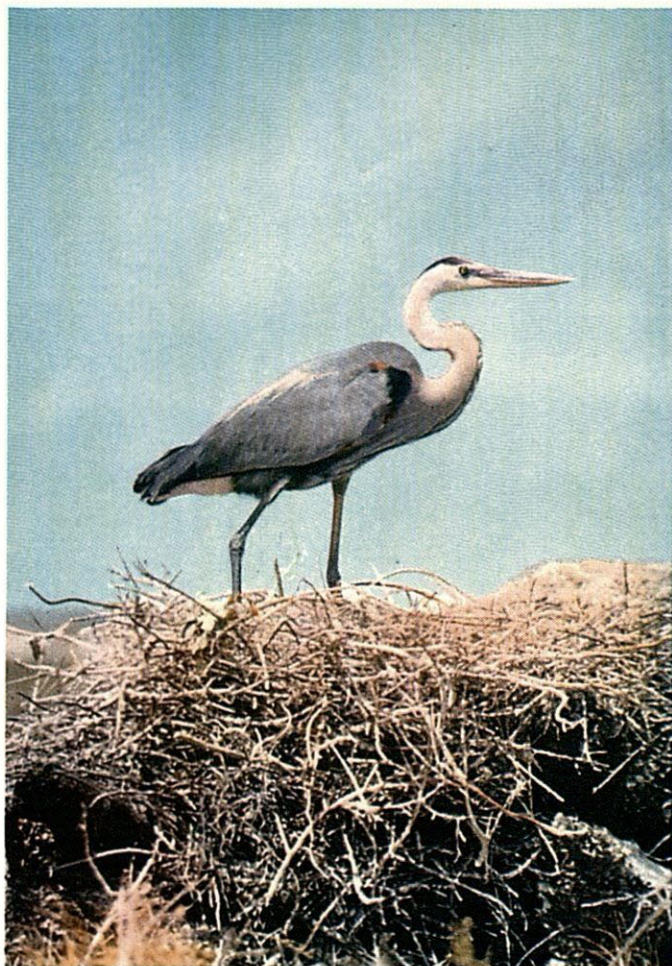
Measuring worm of the Congo. This is the larval stage of one of the geometrid moths, second largest family of the Lepidoptera



Exotic larva of a Peruvian lepidopteran

LEPIDOPTERA: BUTTERFLIES AND MOTHS

PHOTOGRAPHS. (TOP LEFT, CENTRE RIGHT) JOHN H. GERARD; (TOP RIGHT) ROMAN VISHNIAC—PUBLIX, (OTHERS) E. S. ROSS



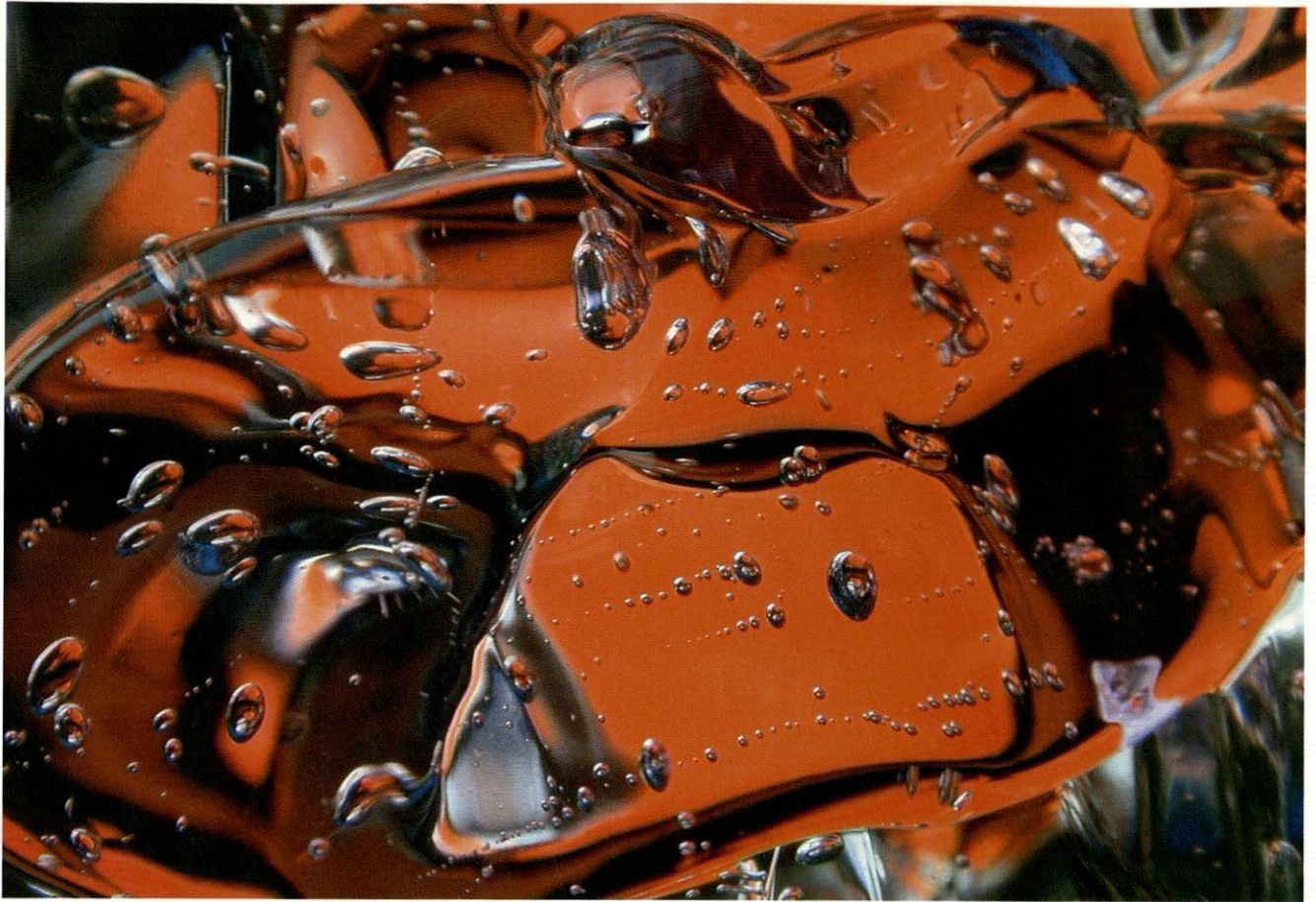
PHOTOGRAPHS, (TOP LEFT, CENTRE RIGHT, BOTTOM LEFT, BOTTOM RIGHT) ALLAN D. CRUICKSHANK FROM NATIONAL AUDUBON SOCIETY, (TOP RIGHT) HAL H. HARRISON FROM NATIONAL AUDUBON SOCIETY

NORTH AMERICAN BIRDS

Top left: Great blue heron (*Ardea herodias*)
 Top right: Blue jay (*Cyanocitta cristata*)
 Centre right: Mourning dove (*Zenaidura macroura*)

Bottom left: Song sparrow (*Melospiza melodia*)
 Bottom right: Mallard duck (*Anas platyrhynchos*)







BY COURTESY OF THE VICTORIA AND ALBERT MUSEUM

ENAMELLED AND GILT GLASS BOTTLE OF SYRIA

Dating from the late 13th or early 14th century, the bottle was probably made at Aleppo. 17½ in. high



OBJECTS ASSEMBLED BY COURTESY OF THE CORNING MUSEUM OF GLASS, CORNING GLASS CENTER; PHOTO BY JOHN KALINICH

EARLY GLASS OF THE UNITED STATES

Top row: Left and right, pair of candlesticks, probably from glassworks of Caspar Wistar, Wistarberg, N.J., about 1740–80. Centre, sugar bowl, probably from Bakewell glasshouse, Pittsburgh, Pa., first half of the 19th century

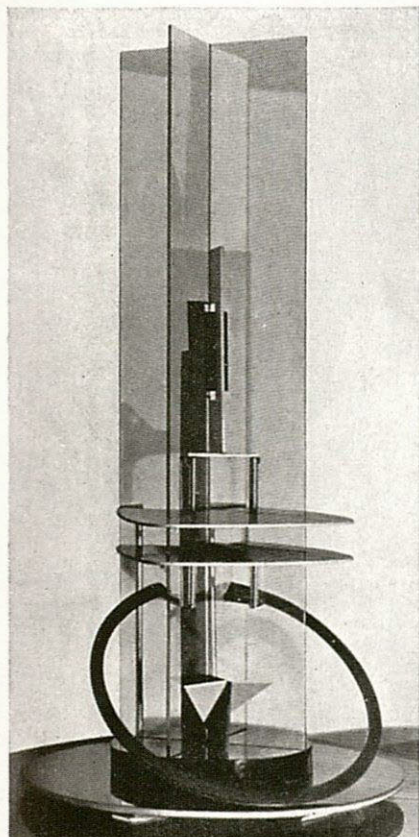
Second row: Left and right South Jersey style pitchers with "lily pad" decoration, probably Lockport or Lancaster glassworks, New York, about

1840–60. Centre, engraved goblet from the New Bremen (Md.) glass manufactory of John F. Amelung, dated 1792

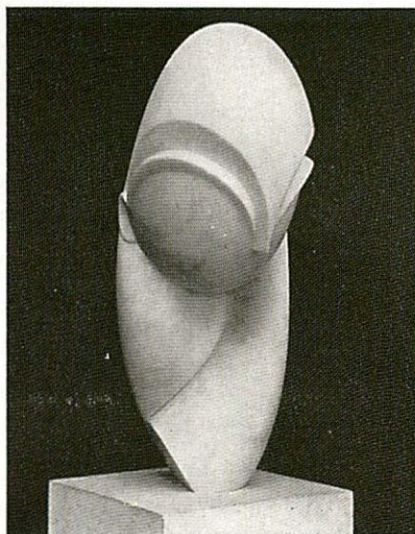
Bottom row: Left, sugar bowl, Wistarberg or Glassboro, N.J., probably last quarter of the 18th century; centre, sugar bowl, probably from Zanesville, O., glassworks, about 1815–30; right, sugar bowl possibly from Mannheim, Pa., or Henry W. Stiegel glassworks, about 1765–74



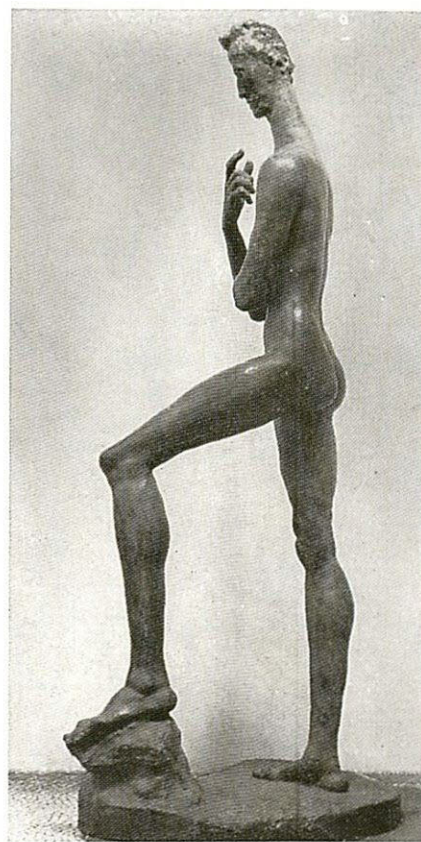




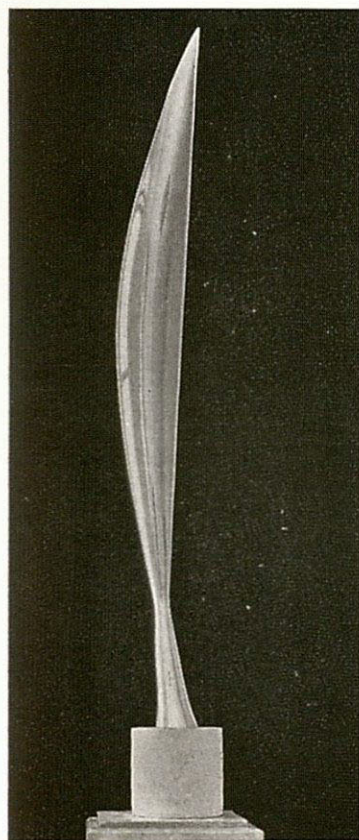
"Column" (1923) by Naum Gabo, U.S. In the Solomon R. Guggenheim museum, New York city



"Mlle Pogany" (1928-29) by Constantin Brancusi, Rumanian. Philadelphia Museum of Art



"Standing Youth" (1913) by Wilhelm Lehmbruck, German. In the Museum of Modern Art, New York city



"Bird in Space" (1919) by Constantin Brancusi. In the Museum of Modern Art, New York city



"Woman's Head" (1909) by Pablo Picasso, Spanish. In the Museum of Modern Art, New York city



"The Horse" (1914) by Raymond Duchamp-Villon, French. In the Walker Art centre, Minneapolis



"Unique Forms of Continuity in Space" (1913) by Umberto Boccioni, Italian. In the Museum of Modern Art, New York city

AVANT-GARDE SCULPTURE AND CONSTRUCTIVISM

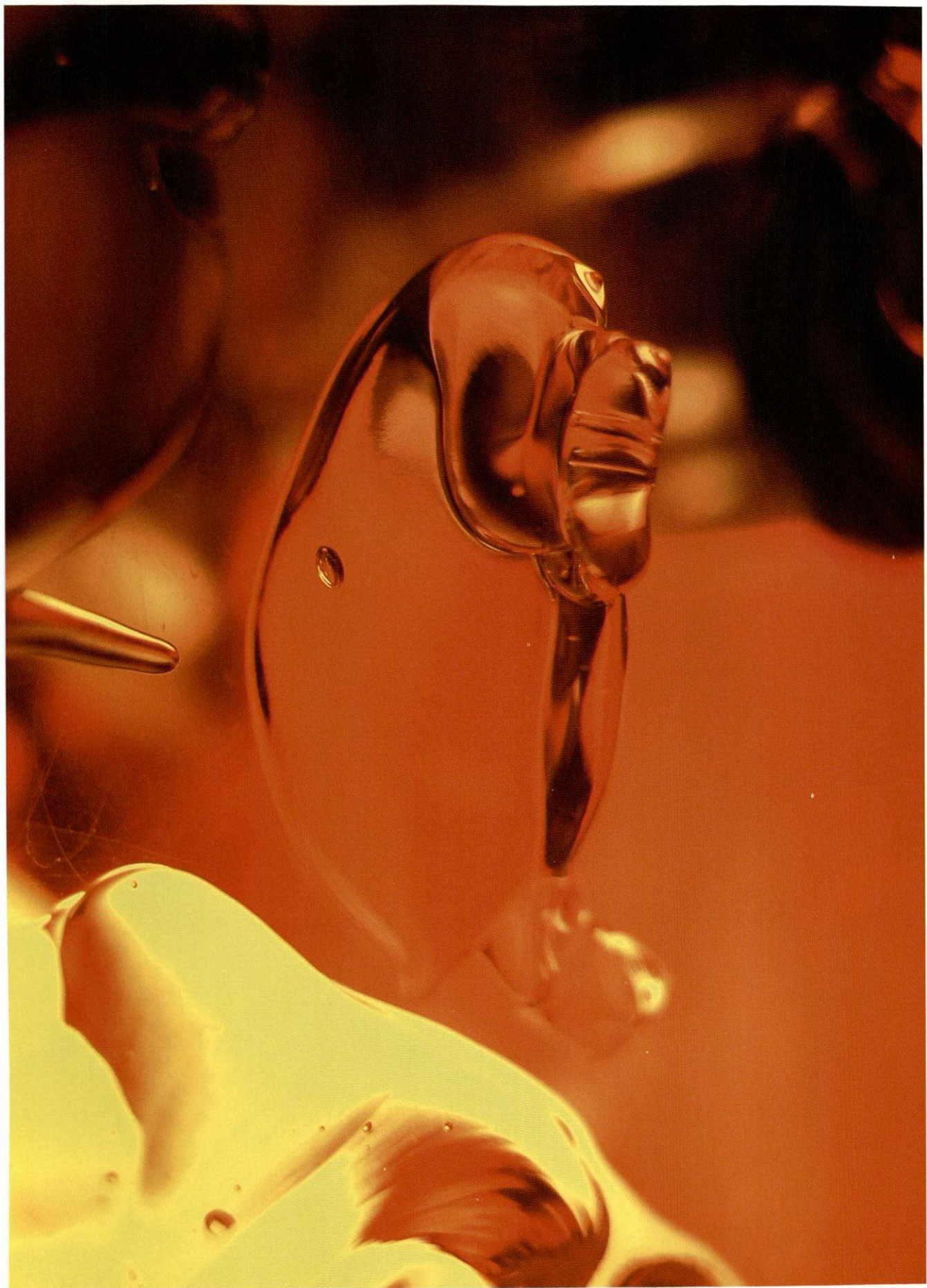
BY COURTESY OF (TOP LEFT) THE SOLOMON R. GUGGENHEIM MUSEUM. (TOP CENTRE) PHILADELPHIA MUSEUM OF ART. (BOTTOM CENTRE) WALKER ART CENTER, MINNEAPOLIS. (OTHERS) COLLECTION, MUSEUM OF MODERN ART, (TOP RIGHT) GIFT OF MRS. JOHN D. ROCKEFELLER JR.. (BOTTOM RIGHT) LILLIE P. BLISS BEQUEST

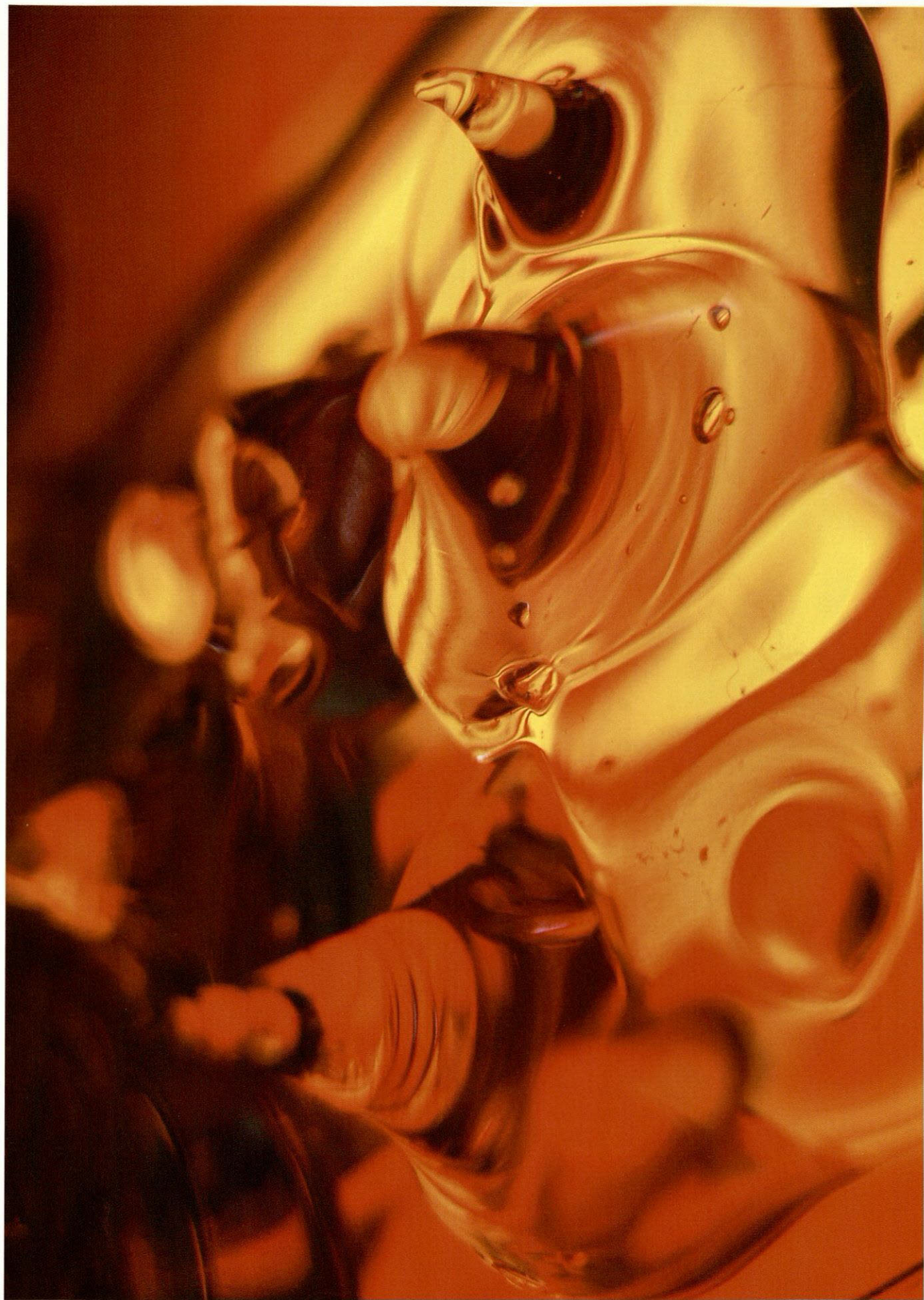


BY COURTESY OF (2, 6) THE NEW YORK ZOOLOGICAL SOCIETY, (5) THE AMERICAN MUSEUM OF NATURAL HISTORY; PHOTOGRAPHS, (1, 3, 4, 7, 8) F. W. BOND

OLD WORLD MONKEYS AND APES

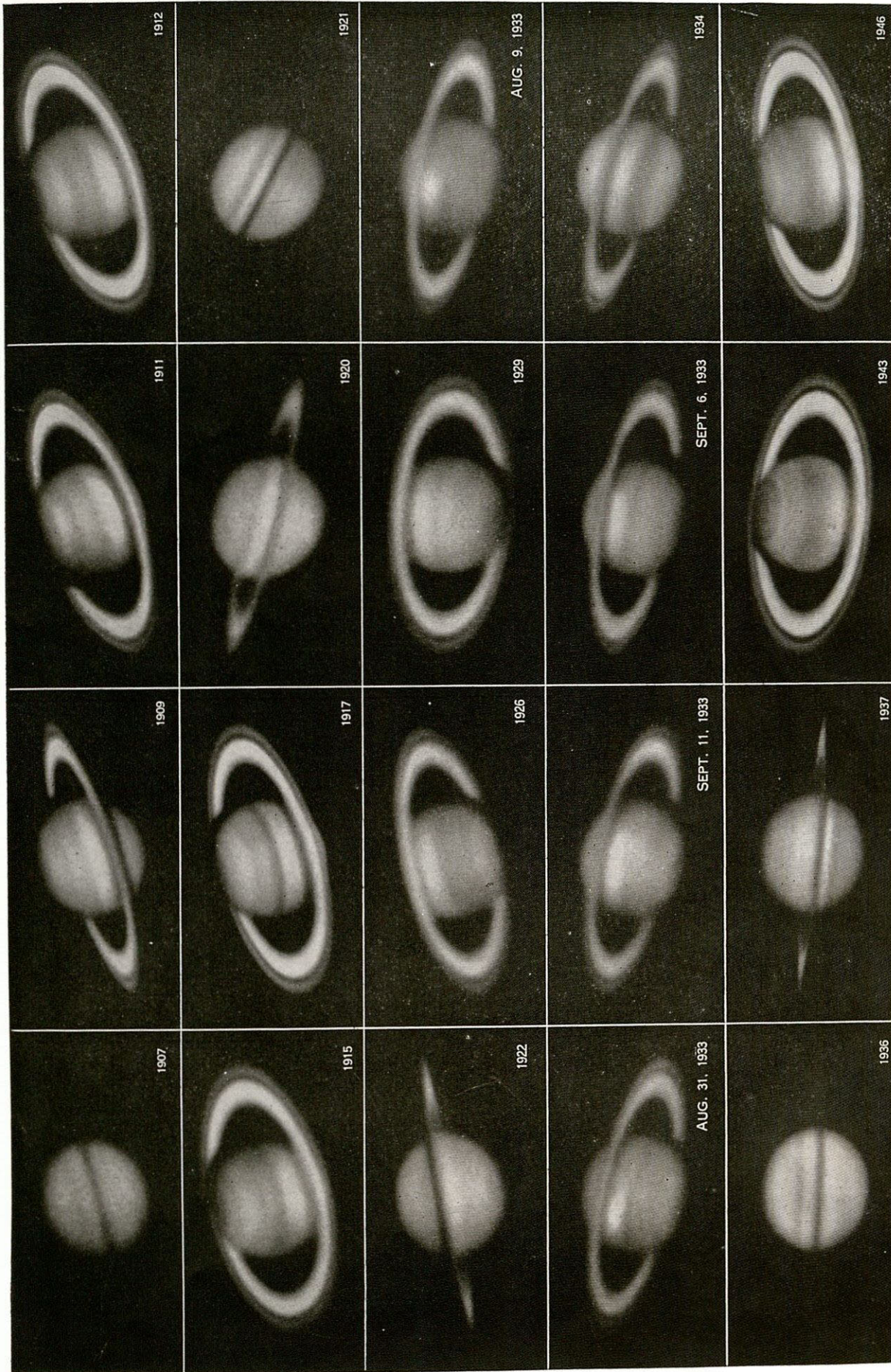
1. Gelada baboon (*Theropithecus gelada*), a large terrestrial monkey of southern Abyssinia. On the old males the hair develops into a mantle-like mane which covers the forequarters, leaving the chest bare
2. Chimpanzee (*Pan troglodytes*), the smaller of the two great man-like apes inhabiting equatorial Africa. It seldom exceeds $4\frac{1}{2}$ feet in height and is almost completely arboreal, sleeping in nests in trees
3. Guenon (*Cercopithecus aethiops*), a small arboreal monkey of the African savannas. It subsists chiefly on fruits and leaves
4. Capped langur (*Trachypithecus pileatus*) female and young of the Malay Peninsula. In common with other langurs it has slender limbs and a very long tail, and feeds on leaves
5. Group of mountain gorillas (*Gorilla beringei*), Belgian Congo, showing two males and two females, the standing male being in characteristic posture of thumping his chest. The male at the left is in the position generally assumed by the gorilla when moving about on the ground
6. Siamang (*Hylobates [Symphalangus] syndactylus*) Malay Peninsula and Sumatra; largest of the gibbon group with an average height of 3 feet. It is distinguished from other gibbons by a laryngeal air sac
7. Orangutan (*Pongo pygmaeus*), "man of the forest," the least man-like of the three great anthropoid apes. It inhabits Borneo and Sumatra
8. The silvery gibbon (*Hylobates moloch*), one of the small arboreal apes of the Indo-Malay peninsula and East Indies





SATURN

PLATE

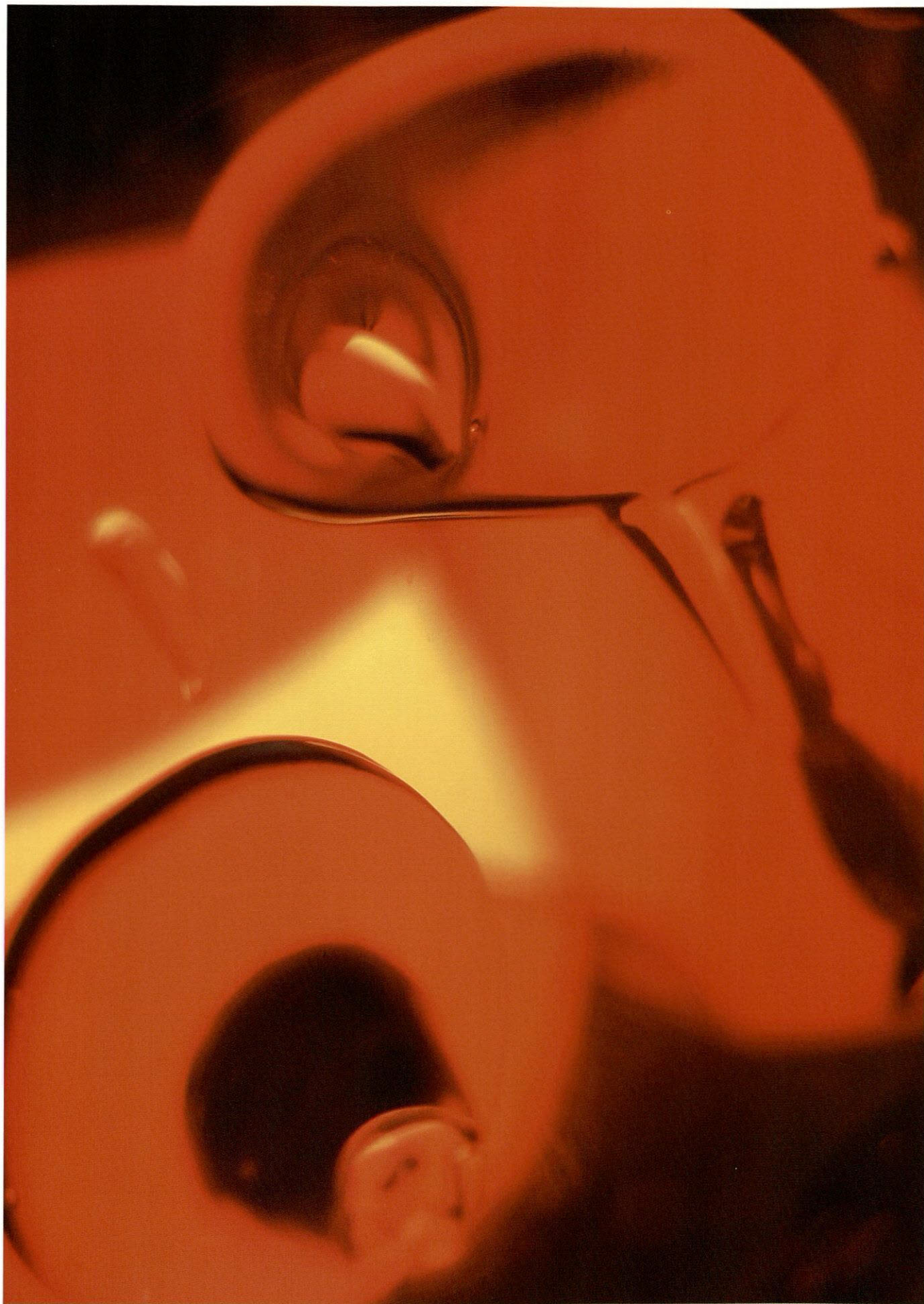


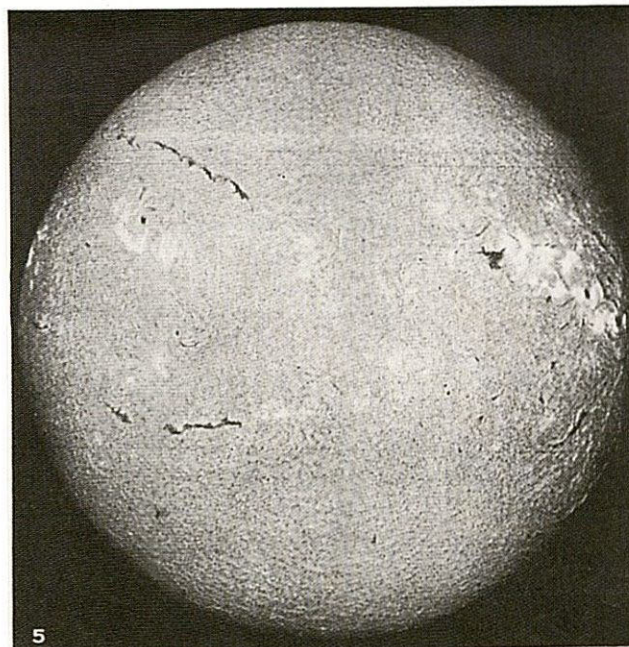
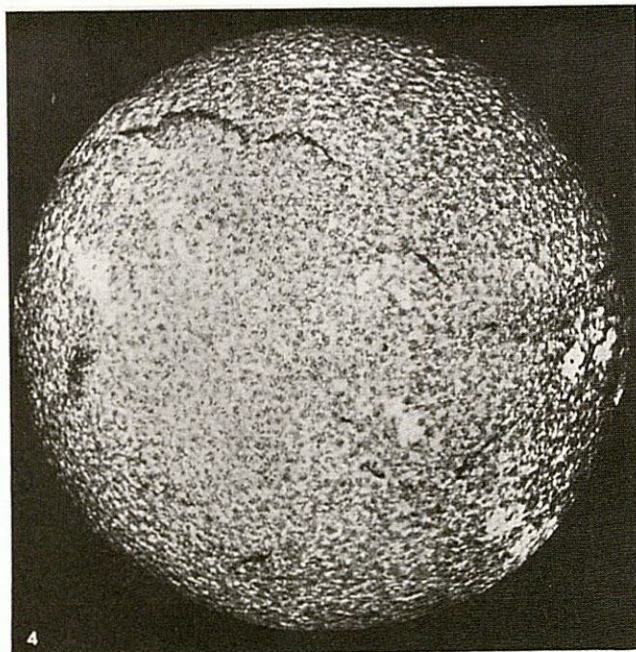
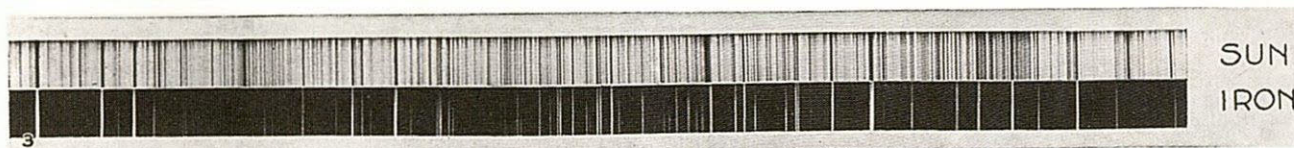
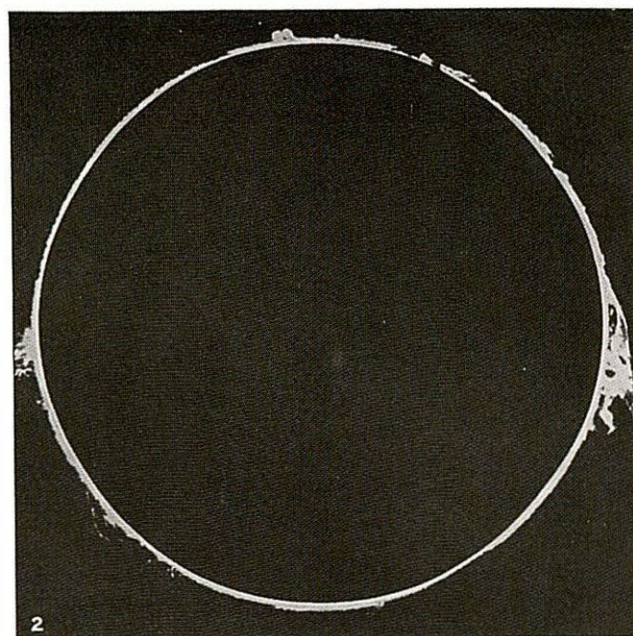
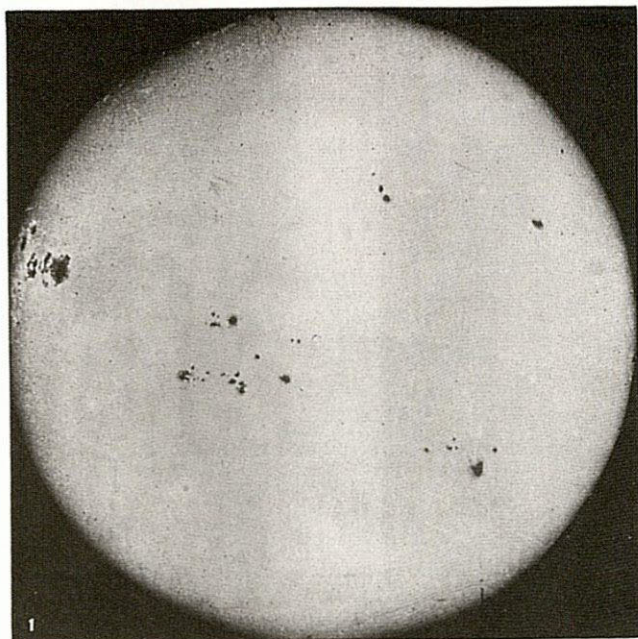
BY COURTESY OF DR. E. C. SLIPHER

SATURN

Various aspects of the planet and its ring system (1907-46). In 1907, 1921 and 1936 the rings were edge-wise and thus too faint to show in normal exposures; in 1915, 1929 and 1943 the rings were wide open. The great white spot of 1933 is shown on Aug. 9 and Aug. 31 almost unchanged, but on Sept. 11 it had rapidly expanded until it extended about $3/5$ the way across the ball. The photograph of Sept. 6, 1933, shows the outburst of still another large white spot more than 100° in longitude following the first

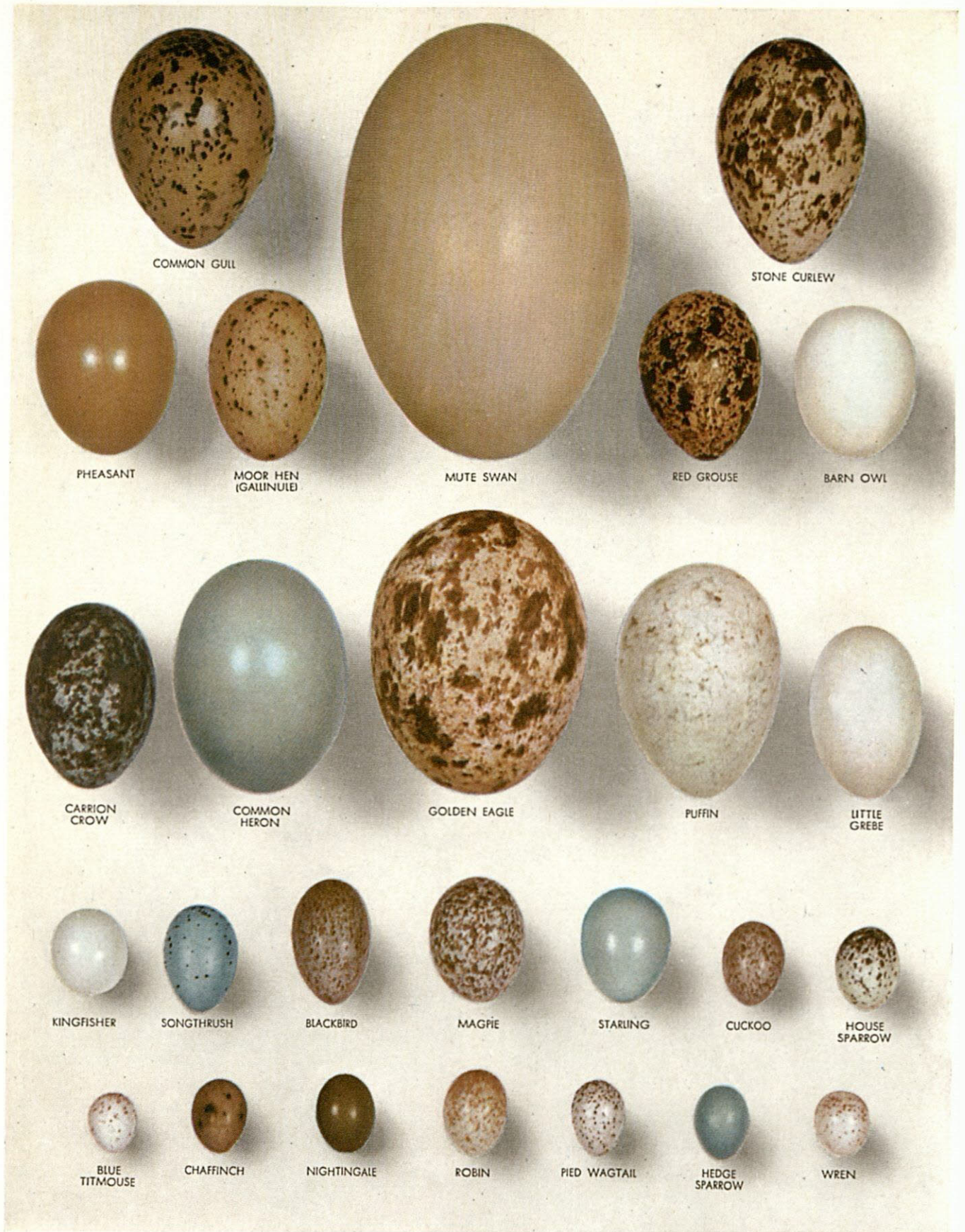
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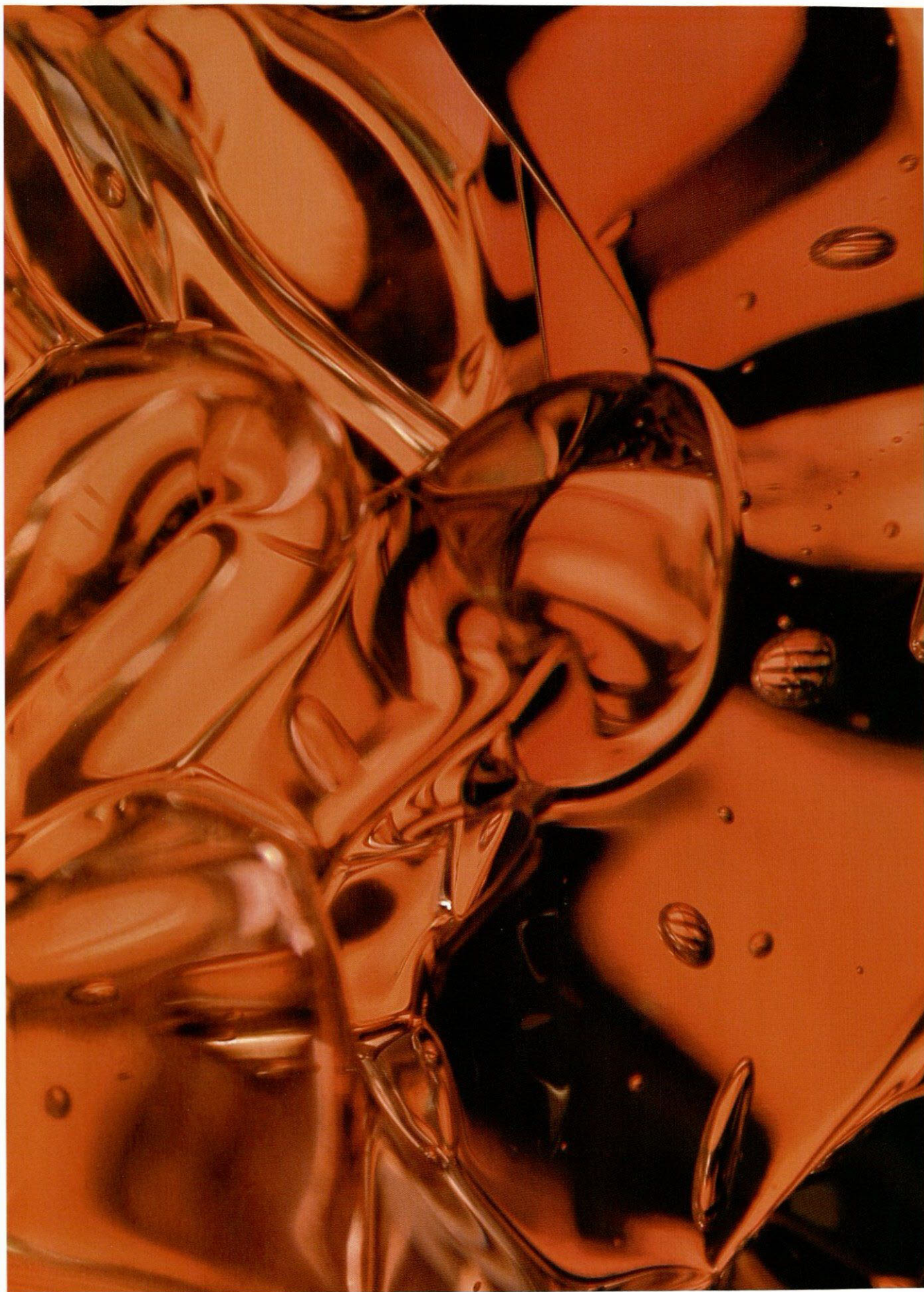
PHOTOGRAPHIC STUDIES OF THE SUN

1. The photosphere of the sun, showing an unusually large number of spots, faculae, and darkening at the limb (Rutherford)
2. Photograph taken in calcium light, the image of the photosphere having been artificially covered. Shows Chromosphere and Prominences (Evershed)
3. Comparison of solar spectrum with laboratory spectrum of iron (violet region). Presence of iron in the atmosphere of the sun is indicated by coincidence in positions of lines (Imperial College)
4. Spectroheliogram (photograph of sun made by monochromatic light) showing distribution of high-level calcium in the solar atmosphere (Deslandres)
5. Spectroheliogram showing distribution of hydrogen in the solar atmosphere (Deslandres)



BY COURTESY OF THE BRITISH MUSEUM (NATURAL HISTORY)

EGGS OF BRITISH AND EUROPEAN BIRDS (THREE-FOURTHS LIFE SIZE)







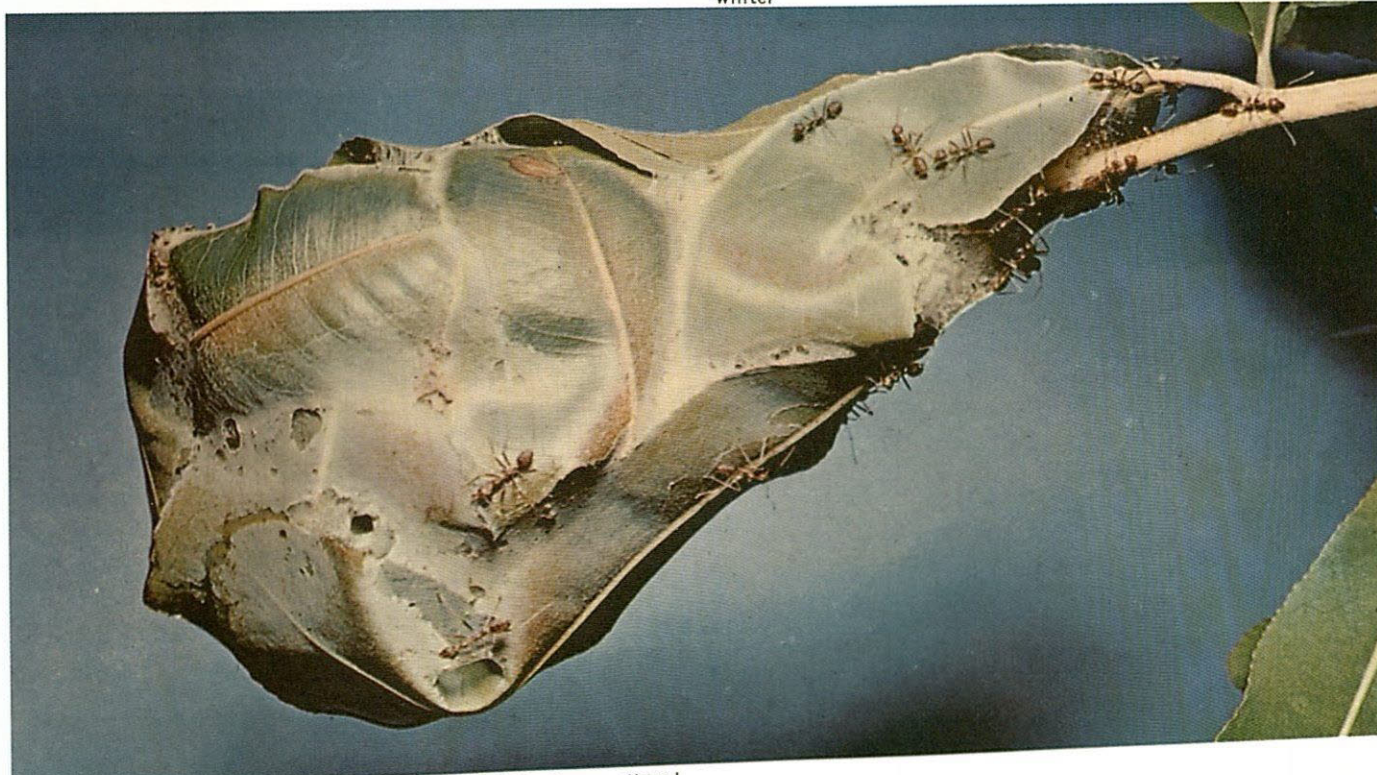
Nest building by tailor ants (*Oecophylla species*) of Angola. Ant at left is holding a larva and squeezing it. As larva secretes silk, second ant uses it to weave leaves together. See below



Group of tailor ants pulling leaves together in preparation for permanent attachment by sewing with larval silk



Formica ants tending aphids. The smaller insects are "milked" by ants for a sweet "honeydew" they secrete. In return, the ants carry the aphids to choice feeding grounds and may take them into their own nests during the winter



Completed nest of the tailor ant (see pictures above) showing leaves gathered together and sewn around the twig of a tree. Nests may be made more than 100 ft. above the ground in tropical trees

TWO HIGHLY ORGANIZED ACTIVITIES OF THE ANTS



PHOTOGRAPHS, EDWARD VAN BAERLE, © ENCYCLOPÆDIA BRITANNICA

EXOTIC BIRDS

Top left: Sulphur-crested cockatoo (*Kakatoe galerita*), found in Australia, Tasmania and New Guinea. It is about 20 in. long

Top centre: Swainson's lorikeet (*Trichoglossus haematod moluccanus*), an 11-in. long bird of eastern and southern Australia and Tasmania

Top right: Toco toucan (*Rhamphastos toco*), the largest of the toucans, is about 24 in. in length. Its habitat is South America

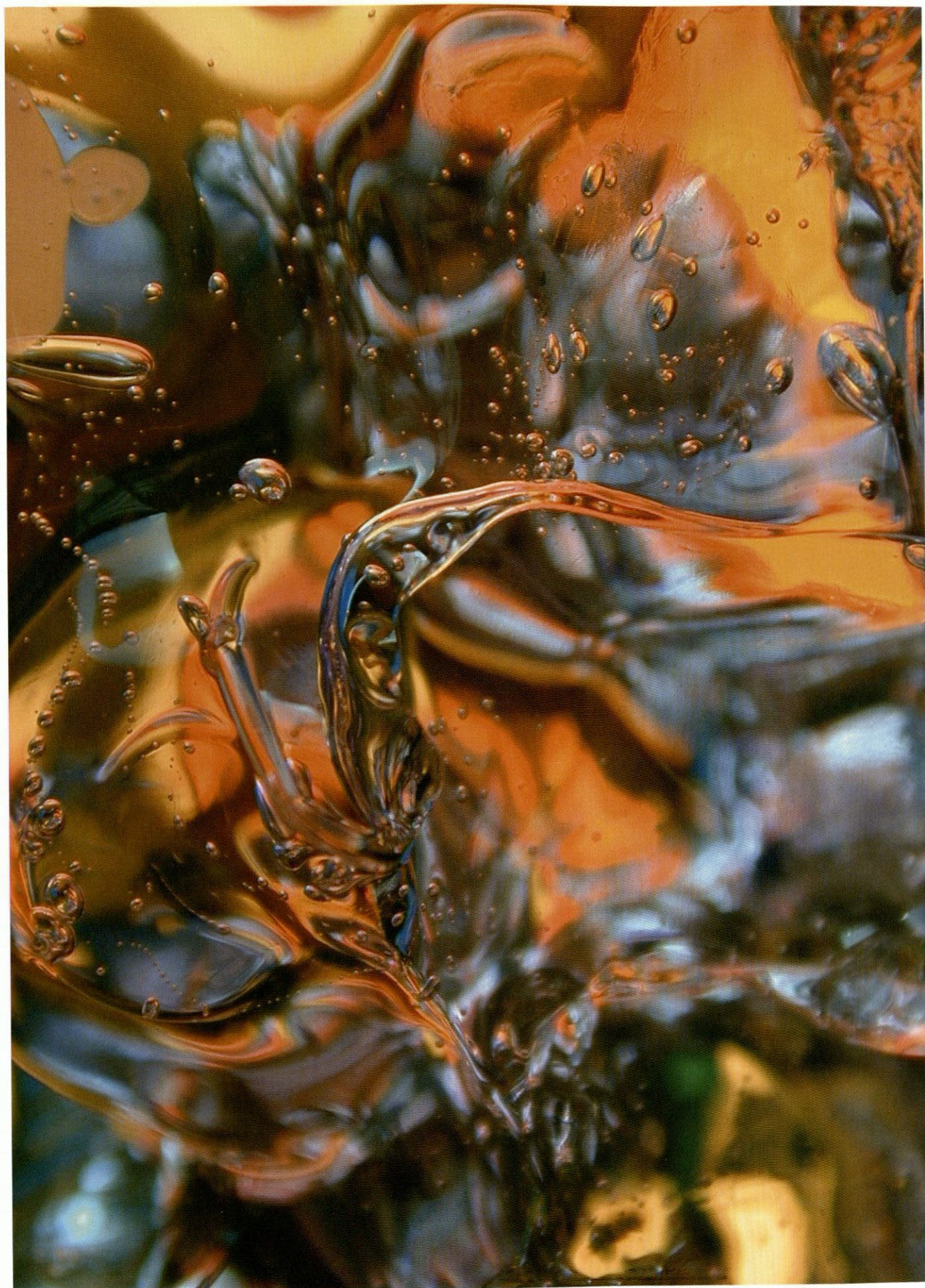
Centre: Giant oriole or black and yellow troupial (*Gymnomystax mexicanus*) lives in open areas of the Guianas and northern Brazil and on the

plains of Venezuela. It is about 12 in. long

Bottom left: Golden pheasant (*Chrysolophus pictus*), found in the mountains of western China, is about 40 in. long

Bottom centre: Crowned crane (*Balearica pavonina*), a 35-in. long African bird

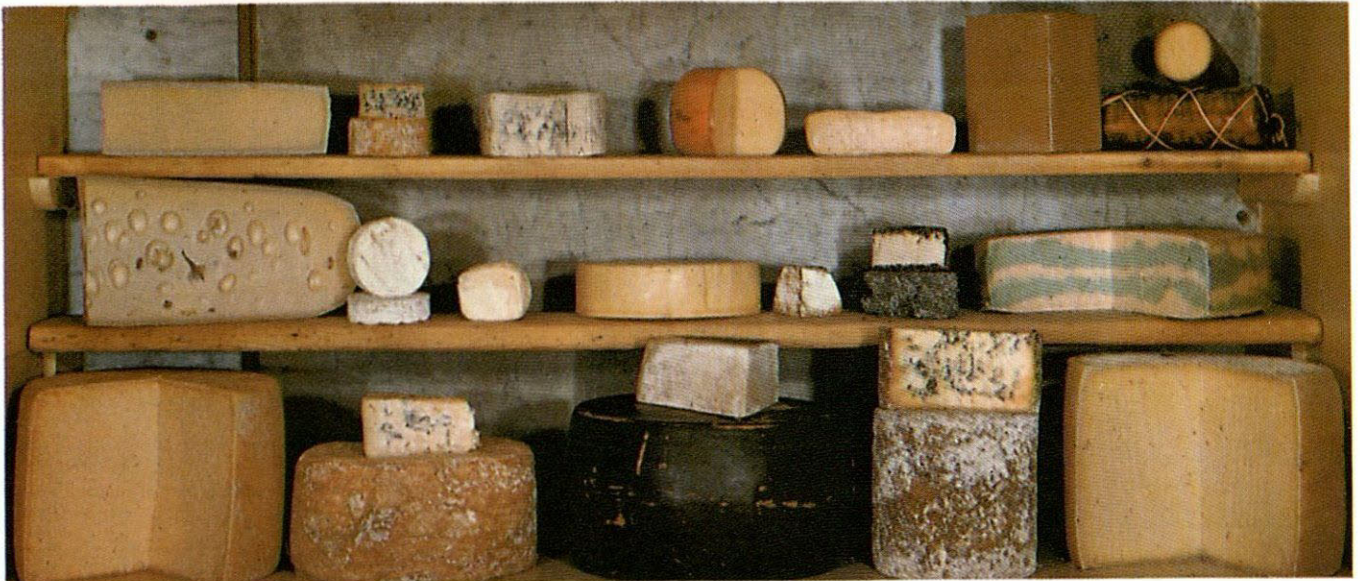
Bottom right: Greater flamingo (*Phoenicopterus ruber roseus*), lives in southern Europe, southern Asia and Africa. It grows to 50 in. in height



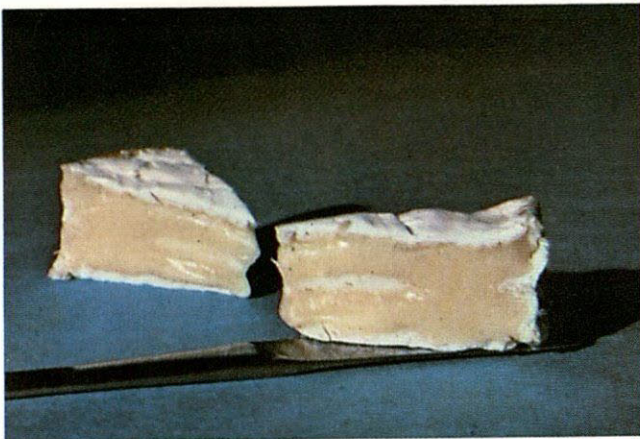


CHEESE

PLATE I



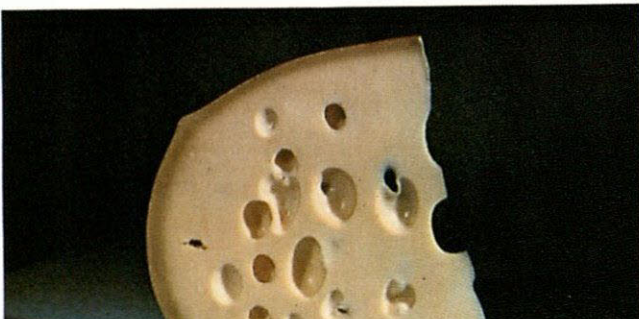
Top row: Gruyère, Bresse bleu, Roquefort, Edam, Italico, Gjetost, Hungarian Trappist
Centre row: Emmentaler, Camembert, Cream cheese, Caerphilly, Goat cheese, Tome au raisin, Sage Derby
Bottom row: Cheshire, Gorgonzola, Parmesan, Stilton, Cheddar



Camembert, soft cheese made from cows' milk. The creamy texture is produced by the action of an outer coating of *Penicillium candidum* and *Penicillium camemberti* mold



Roquefort, semisoft cheese made from ewes' milk. The sporulation of *P. roquefortii* mold during the ripening period causes the greenish-blue marbling characteristic of this cheese





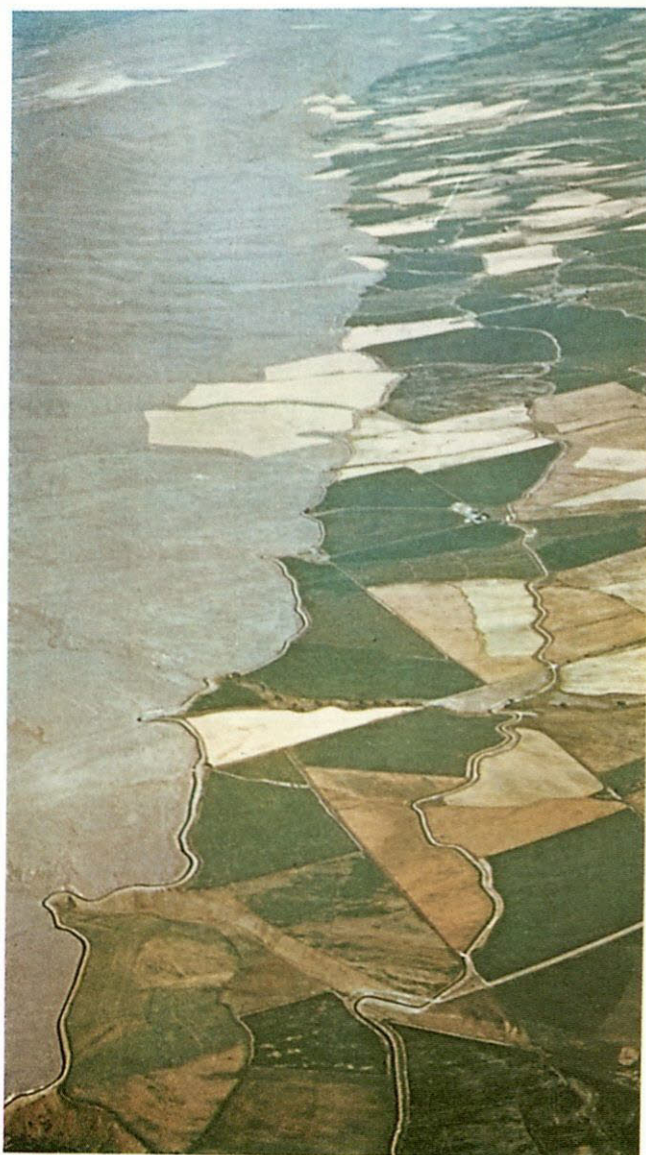
Montana wheat plains near Broadview. Each stripe is 10 rods wide, the golden ones planted in winter wheat, the brown ones fallow to conserve ground moisture



Wisconsin dairy farm. Land is sown for feed: corn, hay and pasture



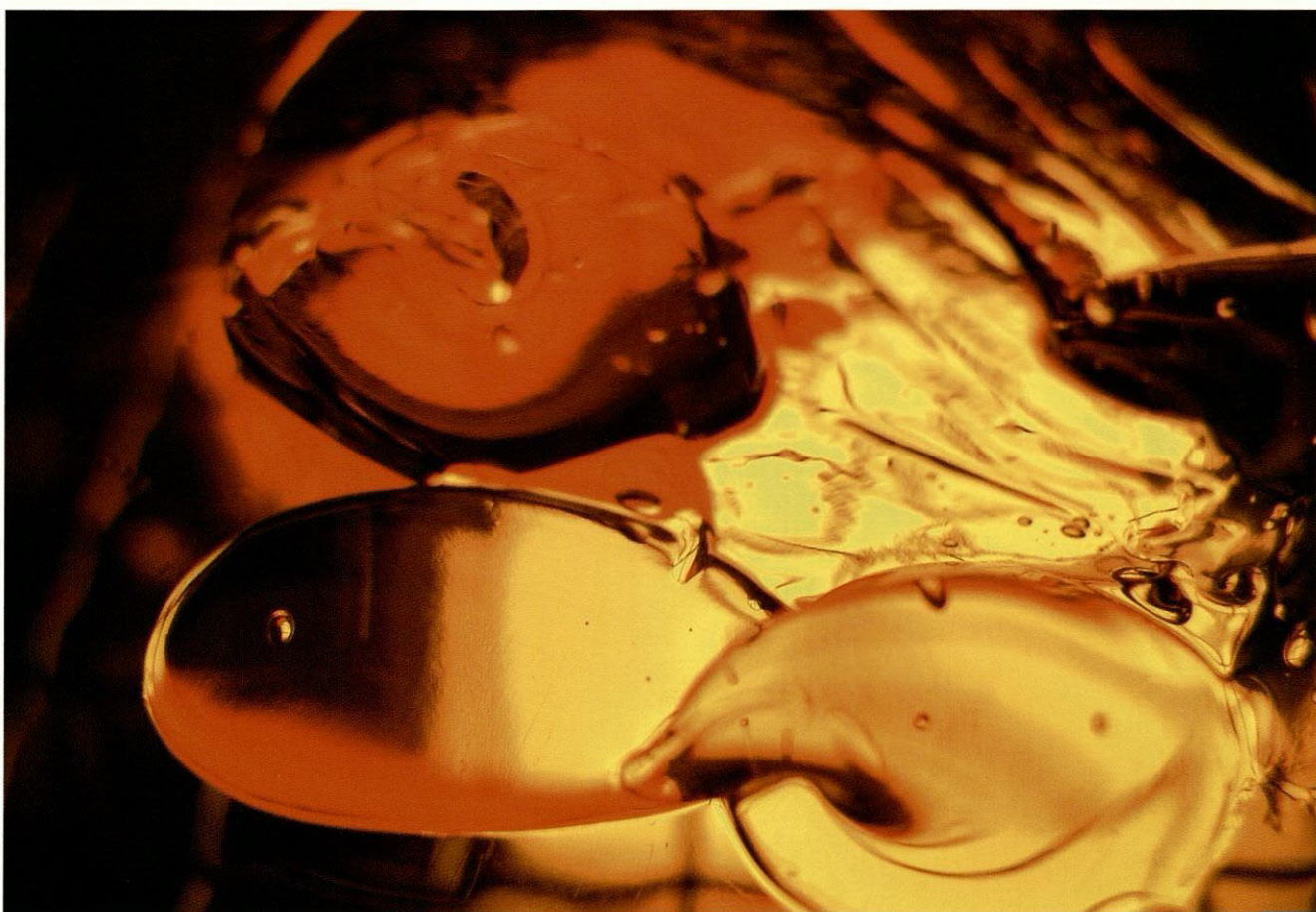
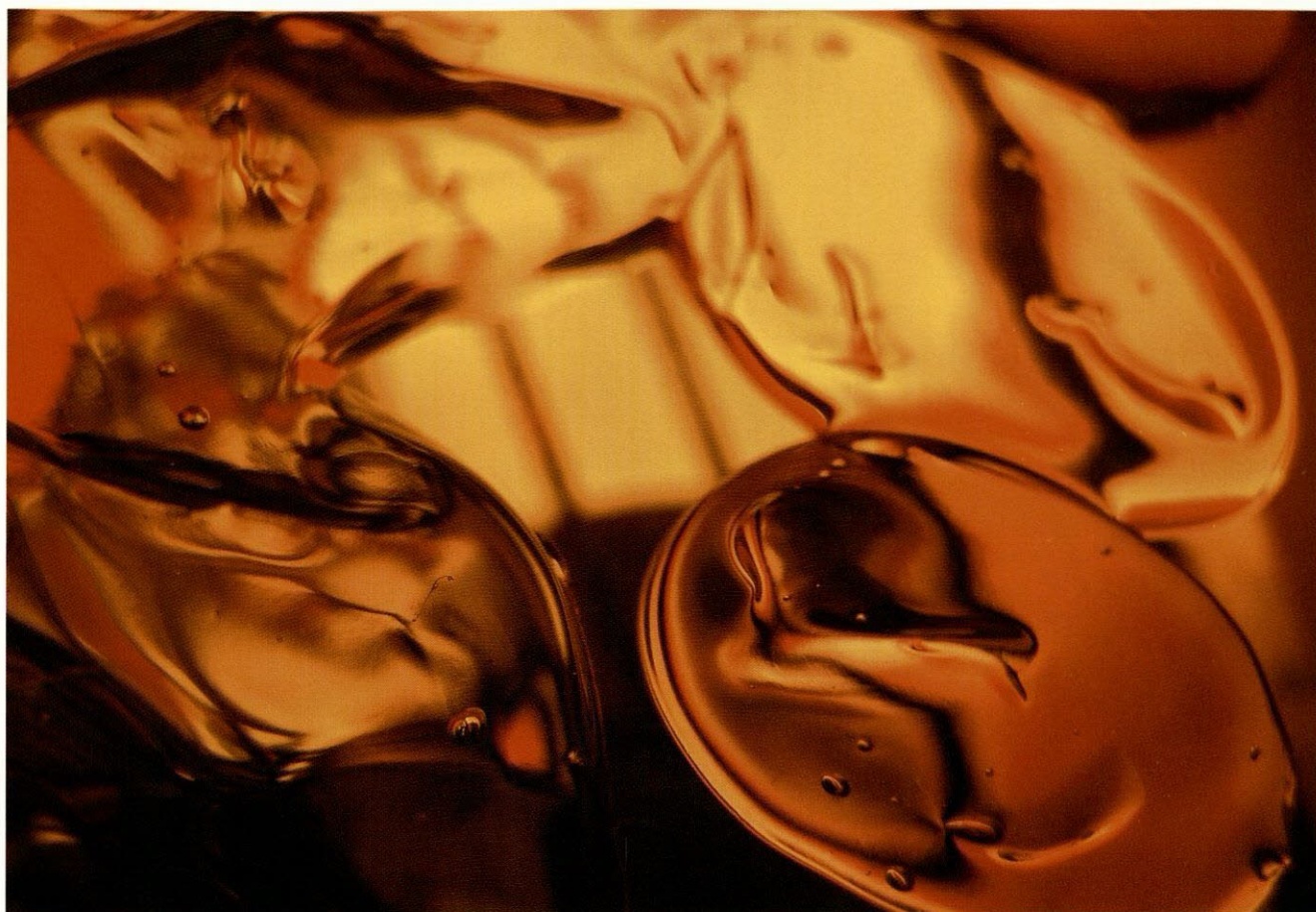
Corn and oats planted along the contours of rolling land in Nebraska



Irrigation in the west: ditch divides sagebrush wasteland (left) from alfalfa and wheat fields in the Kittitas valley, Washington

CROPLANDS OF THE MIDDLE AND FAR WEST







ST. PETER'S BASILICA

The interior of St. Peter's during the assembly of the second Council of the Vatican in 1962. In the background is the bronze baldachin (canopy) by Bernini (1598-1680) over the papal altar. Behind the canopy, at the far end of the apse, is a bronze throne, also by Bernini, containing the wooden chair of St. Peter with an aureole of gilded stucco above it



PHOTOGRAPHS (TOP LEFT) W. F. MANSELL, (TOP RIGHT) A. F. KERSTING, (BOTTOM LEFT) A. MEICHE, ANNABERG, GER.

FRENCH, ITALIAN, ENGLISH AND GERMAN GOTHIC

Top left: Interior of Amiens cathedral, France. High Gothic: nave 1220–36 by Robert de Luzarches; choir by Thomas and Renaud de Cormont. Regarded as the classic Gothic cathedral for its monumentality, verticalism and structural logic

Top right: Interior of the cathedral of Florence, Italy. Italian version of Gothic style; built by Arnolfo di Cambio in 1294; continued by Francesco Talenti in 1355; cupola by Filippo Brunelleschi, 1420. The structure shows earthbound proportions and horizontalism stressed by the springing

line
Bottom left: Chancel of Gloucester cathedral, England. Rebuilt after 1337, the beginning of the Rectilinear (or Perpendicular) style, one of the two English forms of Late Gothic

Bottom right: Interior of St. Anna, Annaberg, Saxony, Germany. Built in 1499. This hall-church, representing a final stage of German Late Gothic, shows a tendency toward the fusion of space and architectural members







BY COURTESY OF (1, 2, 3) FREDRIC MARCH, (4, 5, 6) RUTH GORDON, (7, 8) PAT O'BRIEN; PHOTOS BY (2) MACK ELLIOTT, (4) DOROTHY WILDING, (9) INTERNATIONAL NEWS

THREE U.S. ACTORS MADE UP TO RESEMBLE ACTUAL PERSONS

1. Fredric March without make-up. 2. As the youthful Mark Twain in "The Adventures of Mark Twain." 3. March made up to resemble Mark Twain as an old man. The entire face is made of a latex appliance. 4. Ruth Gordon without make-up. 5. As Queen Victoria as a young

woman. 6. As Queen Victoria as an old woman. 7. Pat O'Brien without make-up. 8. As the football coach Knute Rockne in "The Life of Knute Rockne." O'Brien wears latex nose, eyelids and forehead and a hairlace wig. 9. Knute Rockne himself

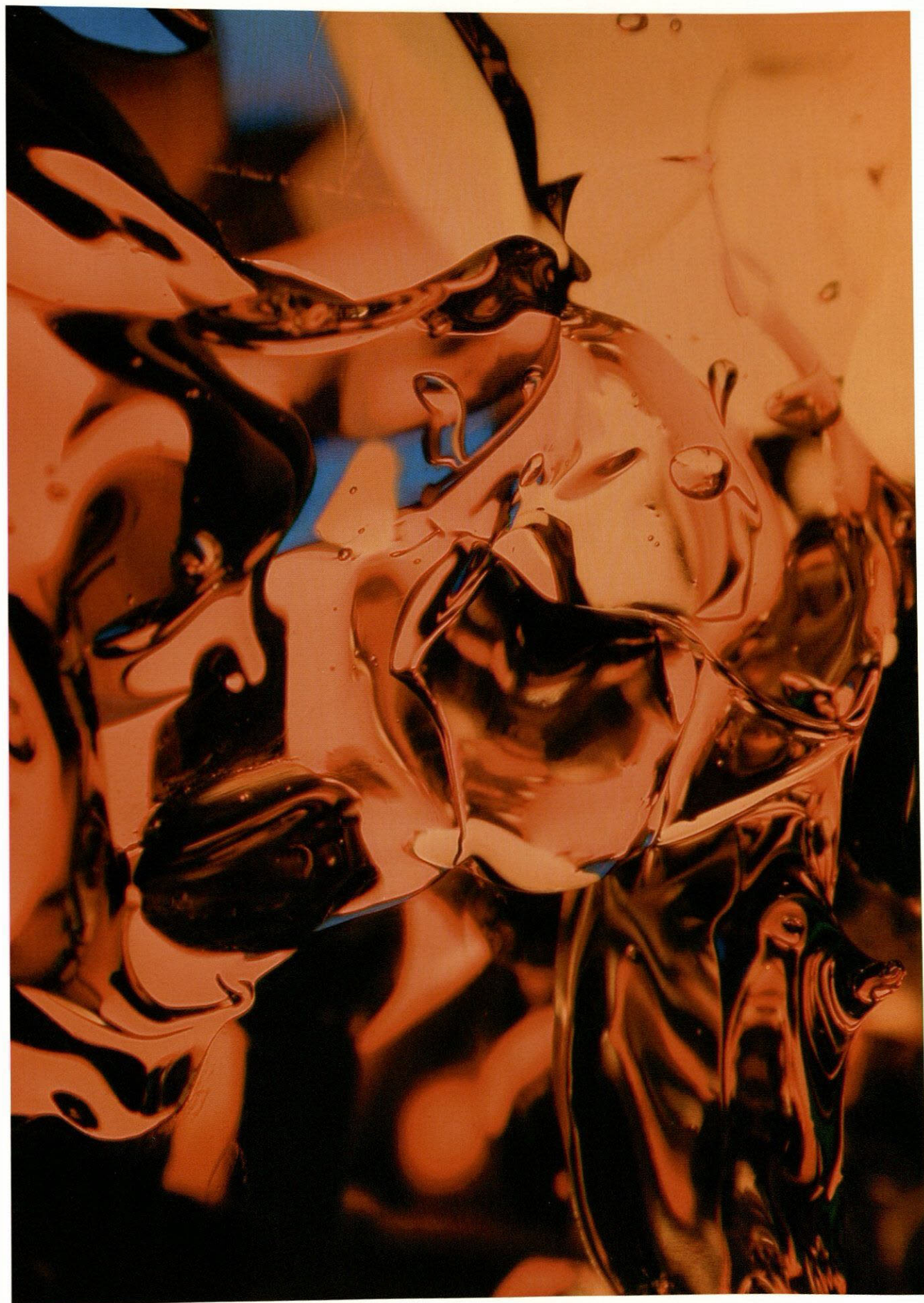


BY COURTESY OF (8) THE PLAYERS, N.Y., (15) M. D. BIANCHI FROM "LIFE AND LETTERS OF EMILY DICKINSON" (HOUGHTON MIFFLIN COMPANY), (18) THE MACMILLAN COMPANY, (20) ALFRED A. KNOPF, INC., (25) HARCOURT BRACE & COMPANY; PHOTOGRAPHS (1) EWING GALLOWAY, (3-6, 10-12, 14, 16) BROWN BROTHERS, (7) SARONY, (9) PACH BROTHERS, (17) UNITED PRESS, (19) WIDE WORLD, (21) ACME, (22) KEYSTONE VIEW, (23) PINCHOT, (24) NICKOLAS MURAY

U.S. AUTHORS OF THE 18TH, 19TH AND 20TH CENTURIES

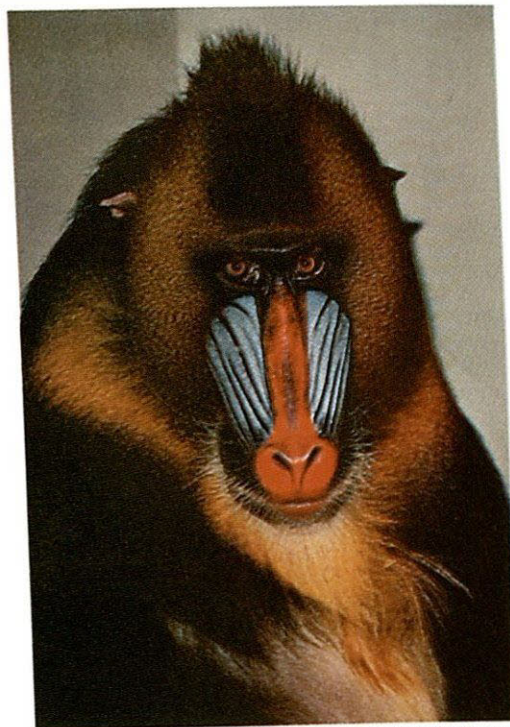
1. Benjamin Franklin (1706-90). 2. Washington Irving (1783-1859). 3. James Fenimore Cooper (1789-1851). 4. Ralph Waldo Emerson (1803-82). 5. Nathaniel Hawthorne (1804-64). 6. Henry Wadsworth Longfellow (1807-82). 7. John Greenleaf Whittier (1807-92). 8. Edgar Allan Poe (1809-49). 9. Oliver Wendell Holmes (1809-94). 10. Harriet Beecher Stowe (1811-96). 11. Henry David Thoreau (1817-62). 12. James Russell Lowell (1819-91). 13. Herman Melville (1819-91). 14. Walt Whitman (1819-92). 15. Emily Dickinson (1830-86). 16. Mark Twain (Samuel Langhorne Clemens) (1835-1910). 17. Henry James (1843-1916). 18. Edwin Arlington Robinson (1869-1935). 19. Edgar Lee Masters (1869-1950). 20. Stephen Crane (1871-1900). 21. Theodore Dreiser (1871-1945). 22. Robert Frost (1875-1963). 23. Sherwood Anderson (1876-1941). 24. Willa Cather (1876-1947). 25. Carl Sandburg (1878-)



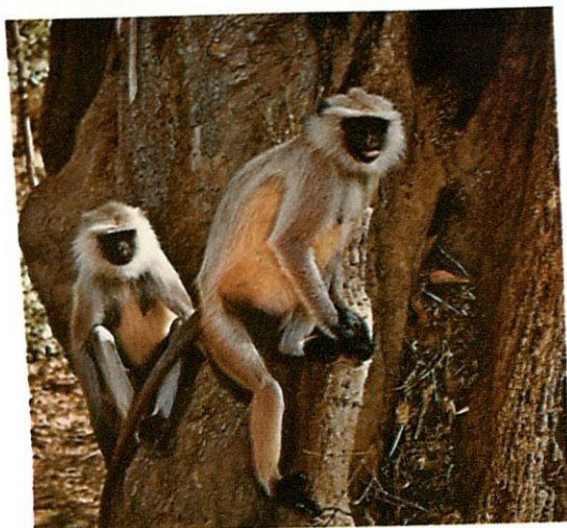




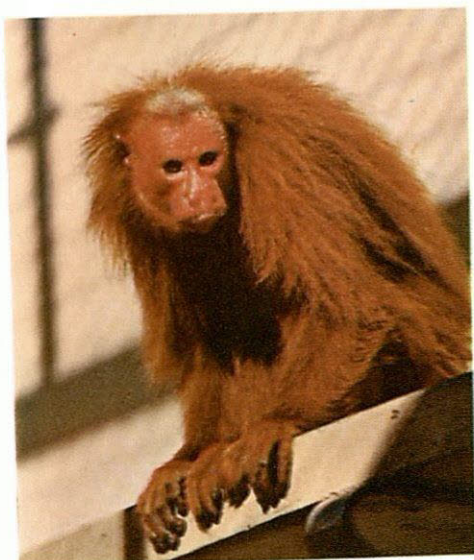
Baboon mother and young from the plains of east Africa



Male mandrill. The mandrill inhabits dense forests of west Africa



Langurs, graceful arboreal monkeys common in southeast Asia



Red-faced uakari from the rain forests of north central South America

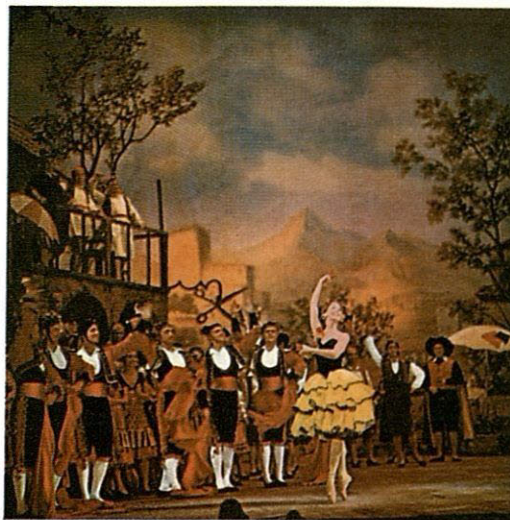


Tarsier, found in the equatorial forests of Malaysia and the Philippines

PRIMATES



Scene from *Giselle* with Galina Ulanova and the Bolshoi Ballet



Scene from *Don Quixote* with Maya Plisetskaya and the Bolshoi Ballet. Choreography, Alexander Gorsky; music, Leon Minkus

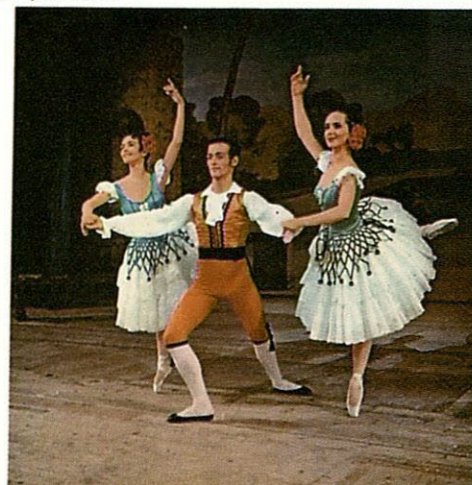
MODERN BALLET



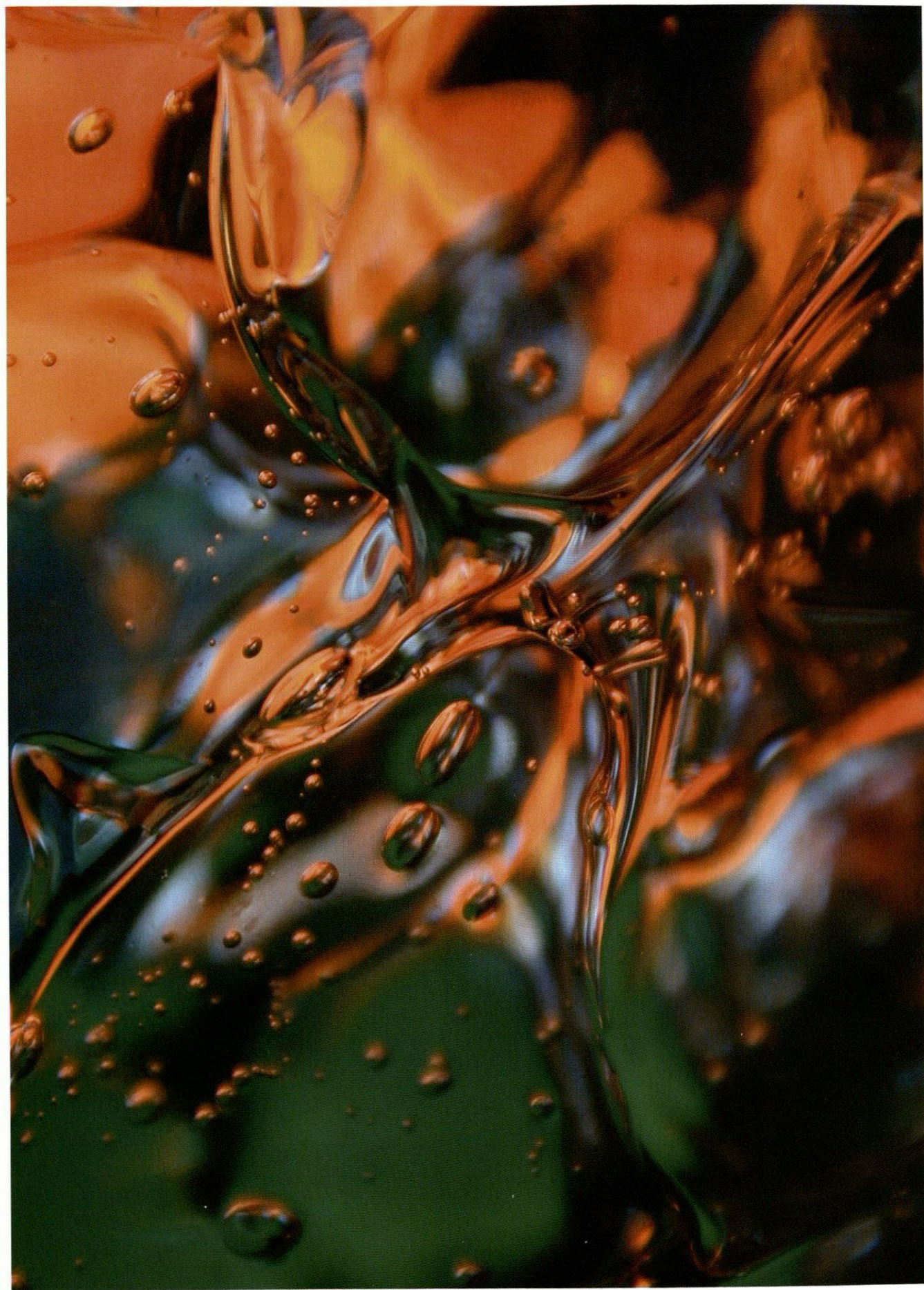
Scene from *Perséphone* with Svetlana Beriosova and Donald MacLary. Choreography, Frederick Ashton; music, Igor Stravinsky. A Royal Ballet production



Scene from *Petrouchka* with Rudolf Nureyev. Choreography, Michel Fokine; music, Igor Stravinsky. A Royal Ballet production



Scene from *La Ventana* with Ruth Andersen, Jorn Madsen and Mette Møllerup. Choreography, August Bournonville; music, H. C. Lumbye. A Royal Danish Ballet production

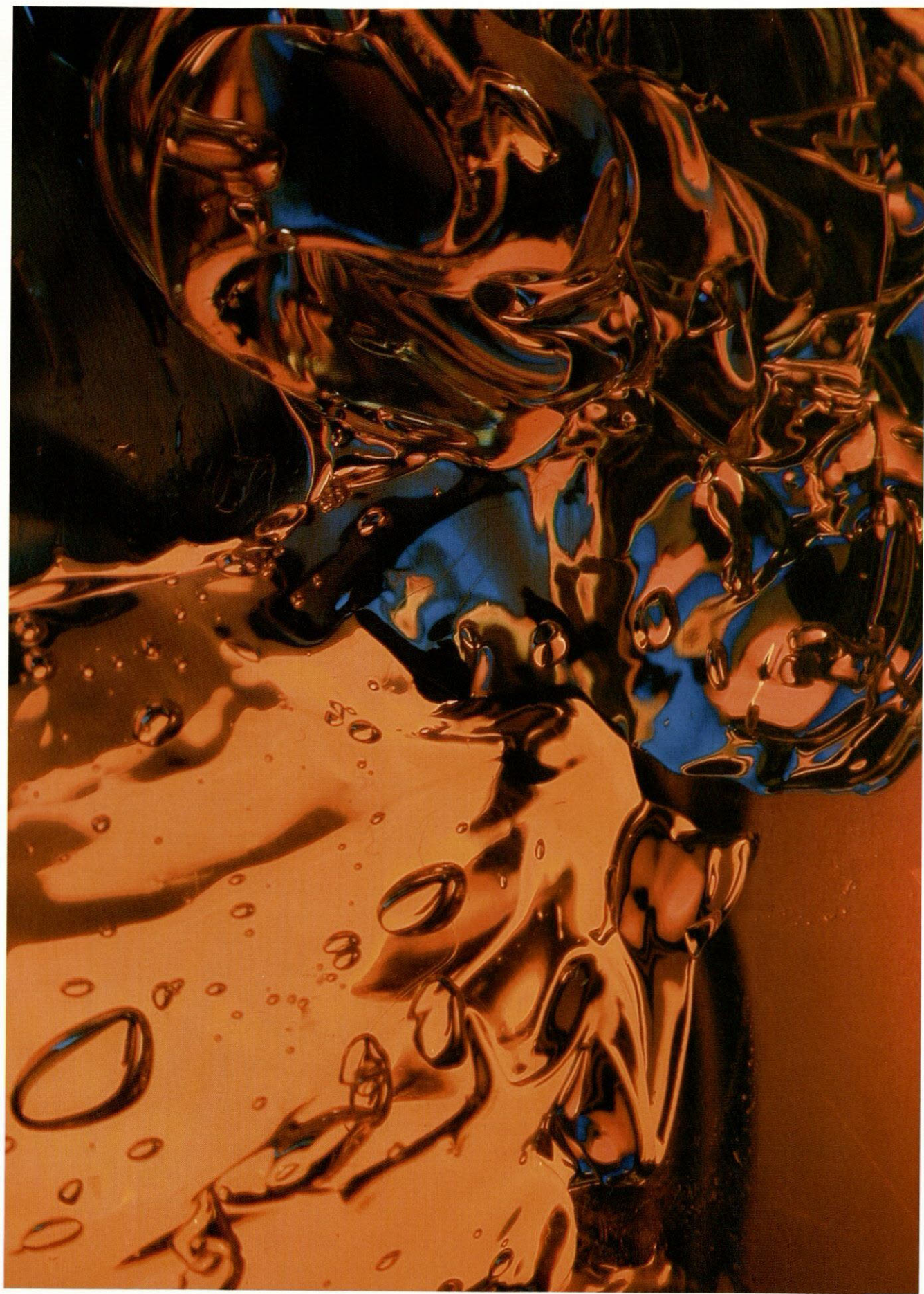


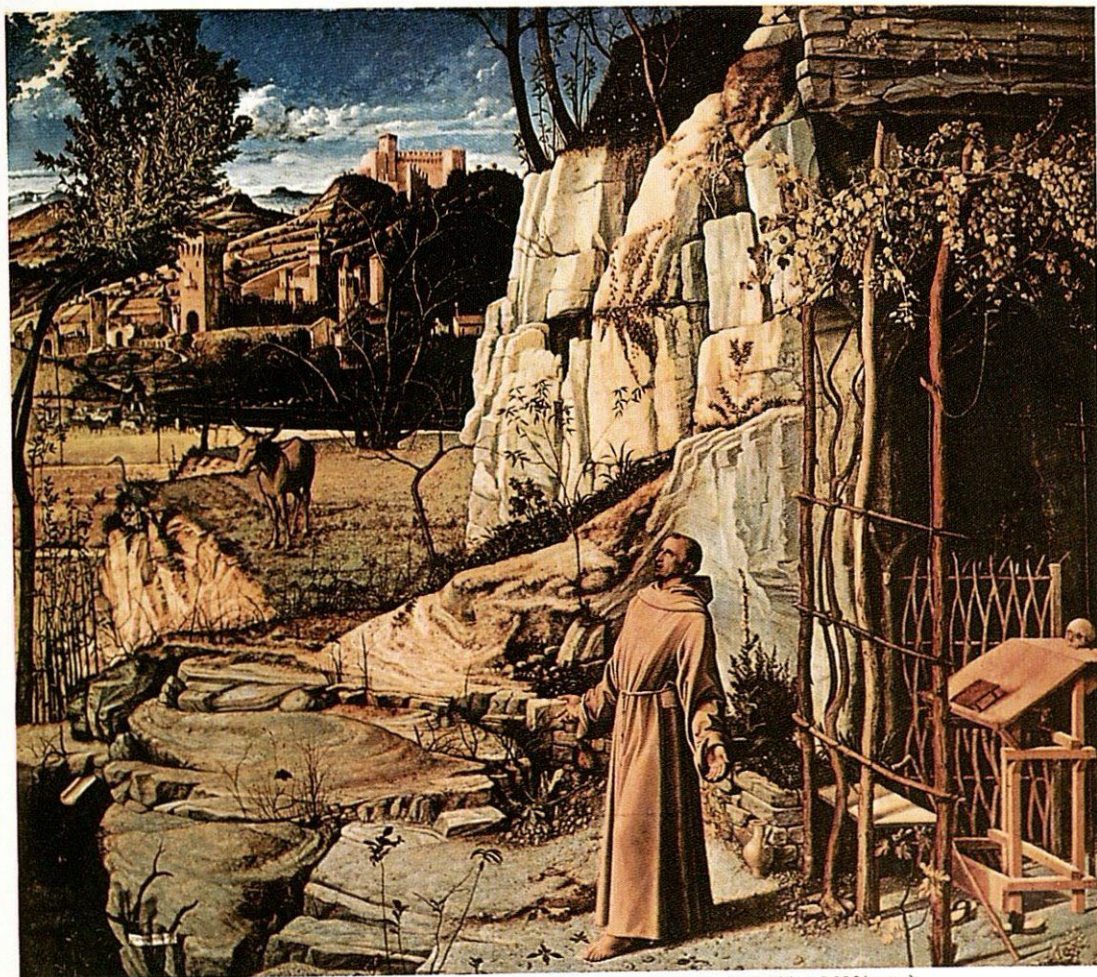


PORTRAIT PAINTING

PLATE I

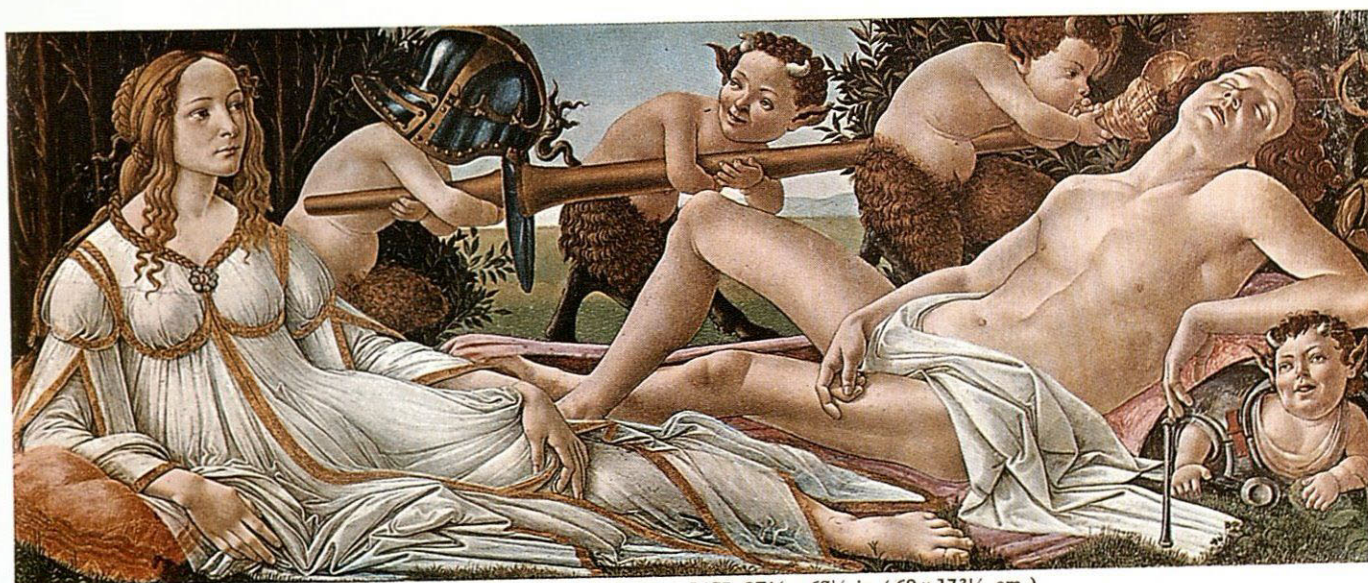






"St. Francis in Ecstasy" by Giovanni Bellini. $48\frac{1}{2} \times 55$ in. ($123\frac{1}{8} \times 139\frac{3}{4}$ cm.)

BELLINI AND BOTTICELLI

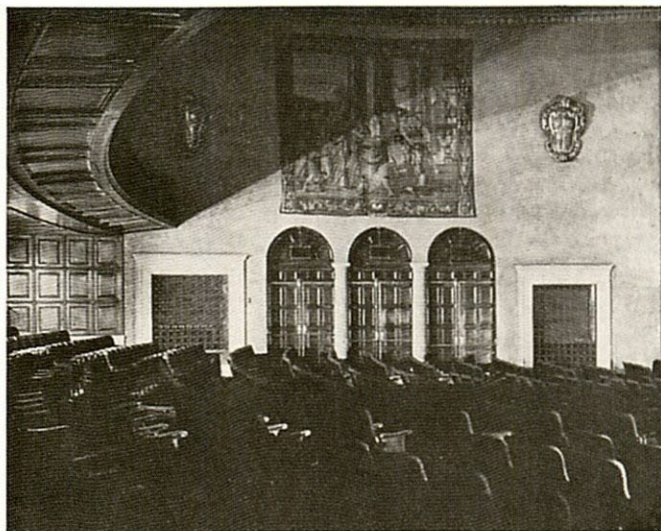


"Mars and Venus" by Sandro Botticelli, c. 1485. $27\frac{1}{4} \times 68\frac{1}{4}$ in. ($69 \times 173\frac{1}{2}$ cm.)

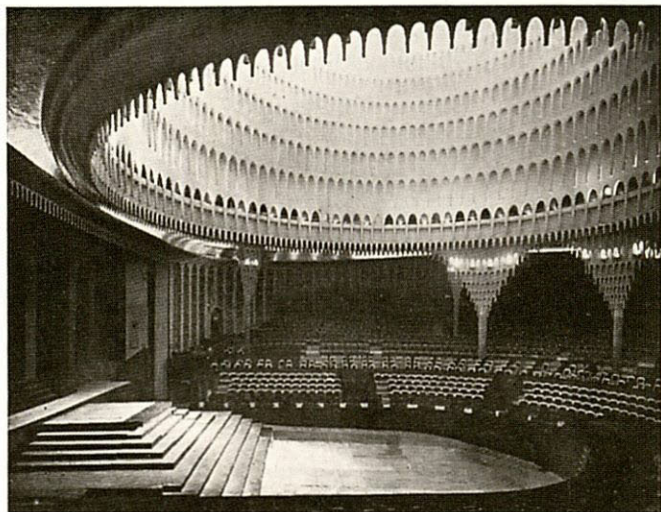
THEATRES (STRUCTURES)



The Ziegfeld theatre, New York city, showing the ornate décor in the auditorium. Architects, Joseph Urban and Thomas W. Lamb; 1927



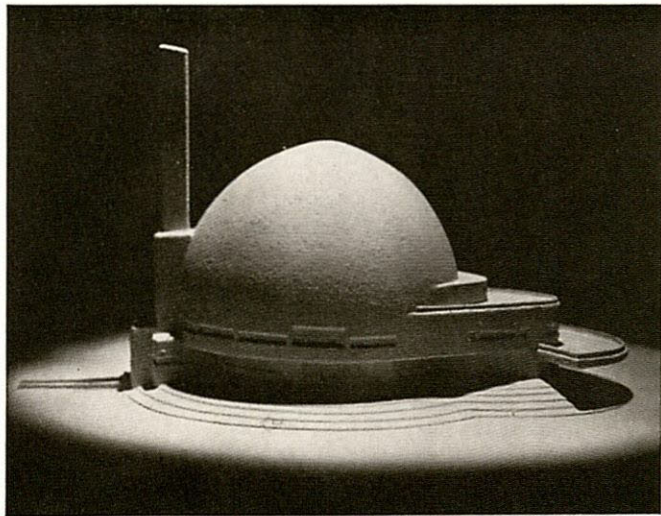
The Guild theatre, New York city, which illustrates the type plan that became standard for picture-frame theatres. Architects, C. Howard Crane, Franzheim and Bettis; 1925



The Grosses Schauspielhaus, Berlin, a circus building converted into a theatre for Max Reinhardt. Architect, Hans Poelzig; 1919



The Künstlertheater, Munich, in which the seating was designed with a constant rise of steps from front to rear. Architect, Max Littmann; 1908



The project Theater #14 designed in 1922 by Norman Bel Geddes for a theatre proposed for the Century of Progress exposition, Chicago (1933-34)

EARLY 20TH-CENTURY THEATRES





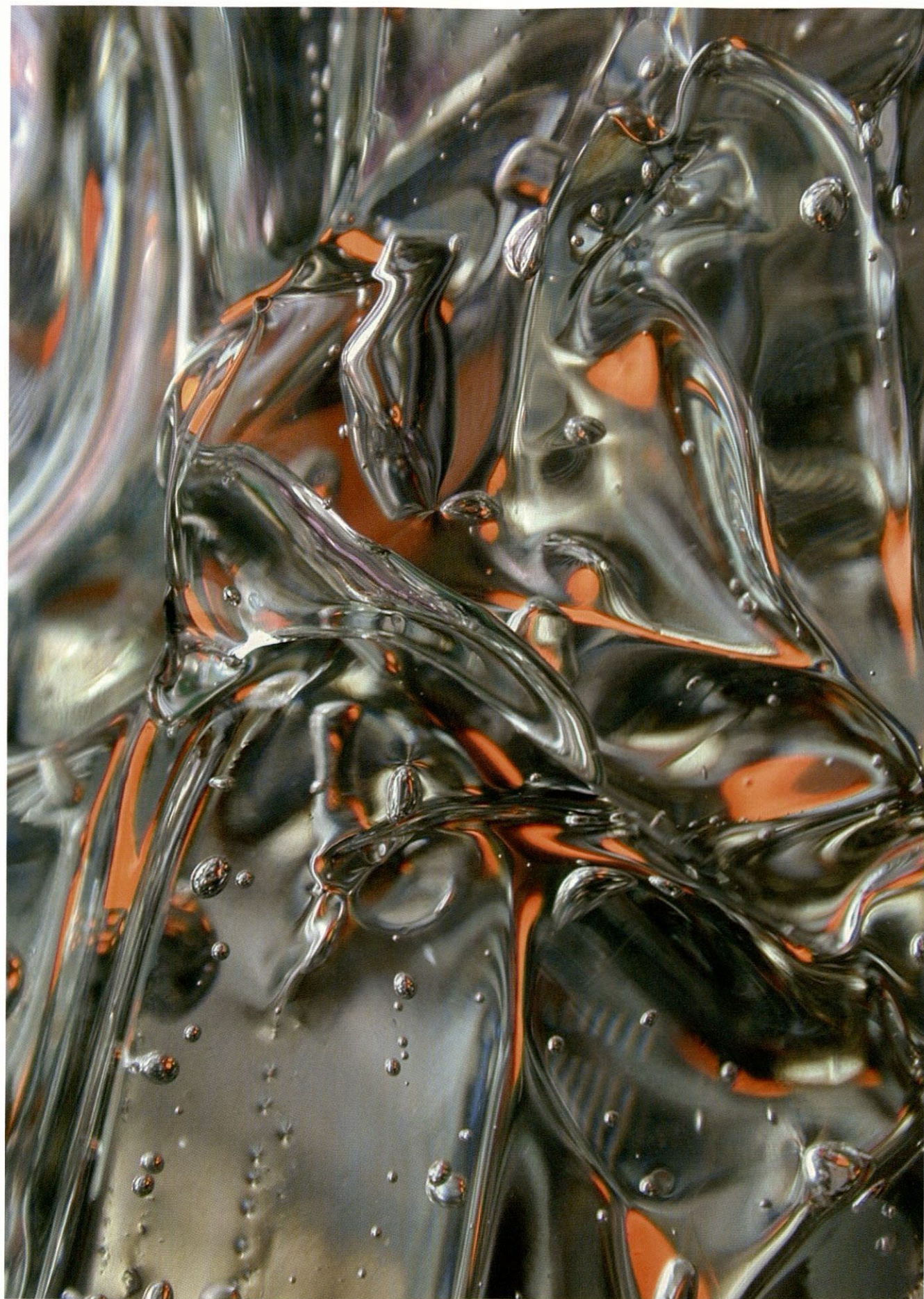


PREPARED UNDER THE DIRECTION OF DR. GEORGE F. KUNZ, HON. CURATOR OF PRECIOUS STONES, AMERICAN MUSEUM OF NATURAL HISTORY; GEM EXPERT WITH TIFFANY AND COMPANY; BY COURTESY OF (1, 4, 8, 9) DR. GEORGE F. KUNZ, (2, 3) THE AMERICAN MUSEUM OF NATURAL HISTORY, (5) DUVAL COMPAGNIE, (6) MRS. W. E. COX, (7) YAMANAKA AND CO.

PRECIOUS ORGANIC SUBSTANCES

1, Pearl in *Unio*, common fresh-water mussel; 2, Pearl from *Unio*, fresh-water mussel; 3, Oriental pearl, black, Gulf of Mexico; 4, Pearl in shell of common clam (*Venus mercenaria*), Long Island Sound; 5, ambergris,

concretion from whale; 6, coral, precious, Japan; 7, amber, Chinese carving, Burma; 8, *Corallum rubrum*, precious coral, Mediterranean; 9, amber, enclosing insect, Samland, Baltic coast





COURTESY, N.Y. ZOOLOGICAL SOCIETY, FROM PHOTOGRAPHS COLOURED UNDER DIRECTION OF R. L. DITMARS. WATER MOCCASIN AND BULL SNAKE PAINTED BY R. F. DECKERT

SNAKES

There are more than 2,000 kinds of snakes. Some 600 are more or less venomous, but only a comparatively small number are fatally dangerous to man. The plate shows six venomous snakes, marked

and three large but harmless snakes. All except the European viper are found in North America

Top, left: Arizona Coral Snake (*Micruroides euryxanthus*), Ven. Top, right: Water Moccasin (*Agkistrodon piscivorus*), Ven. Top, centre: Head of Diamond-back Rattlesnake (*Crotalus*

adamanteus), Ven. Second row: left, Texas Rattlesnake (*Crotalus atrox*), Ven.; right, King Snake (*Lampropeltis getulus*). Third row: left,

Copperhead (*Agkistrodon mokasen*), Ven.; right, Water Snake (*Natrix sipedon*). Bottom: left, European Viper (*Vipera berus*), Ven.; right, Bull snake (*Pituophis sayi*)



American Puritan; 17th century

American colonial; 18th century

French Empire; early 19th century

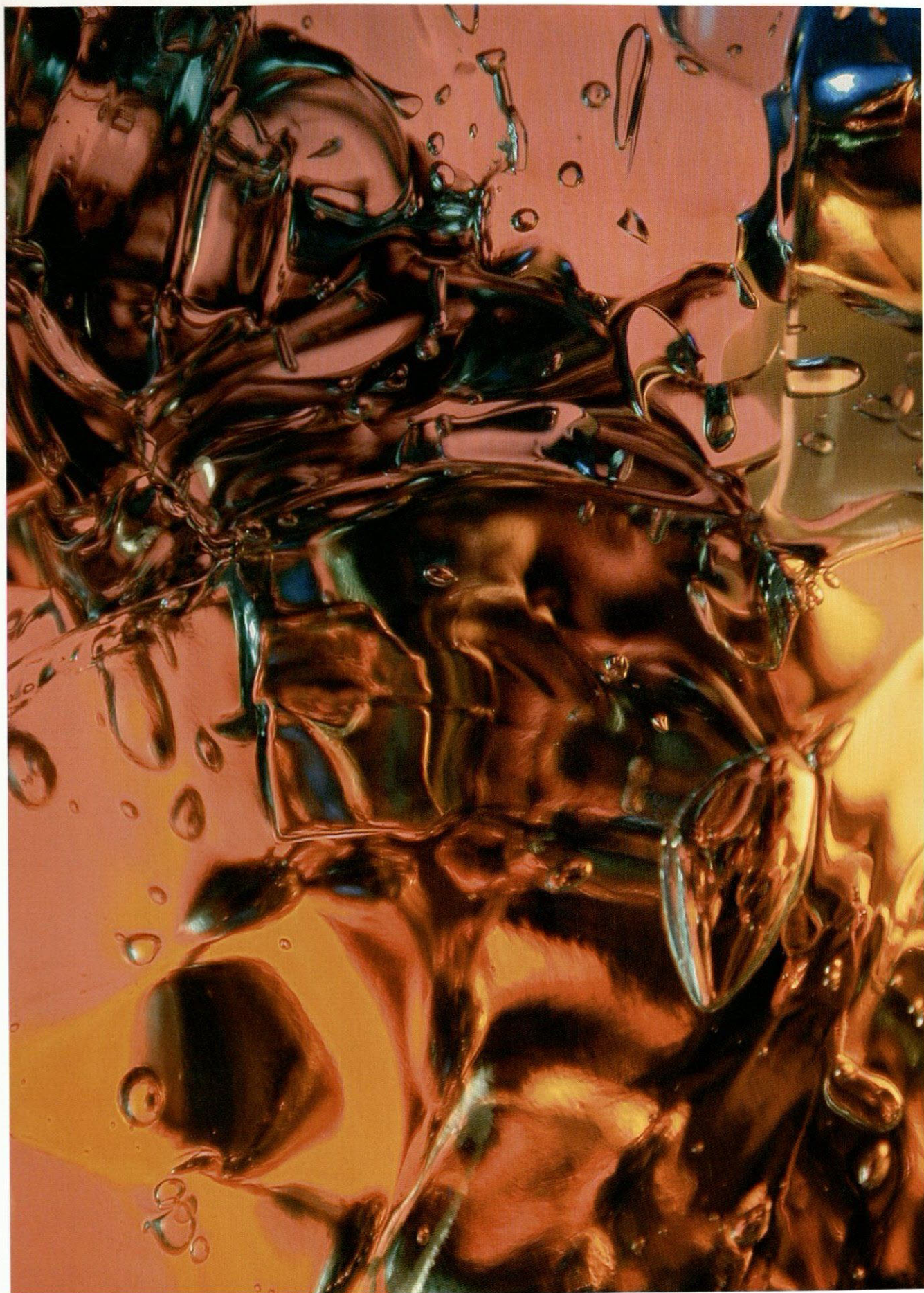


English Victorian; mid-19th century

English and American; 19th century

French; early 20th century

U.S. AND EUROPEAN DRESS FROM THE 17TH TO THE 20TH CENTURY

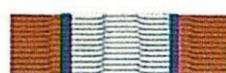




DECORATIONS



*MEDAL OF HONOR

DISTINGUISHED SERVICE
CROSSDISTINGUISHED SERVICE
MEDAL

*SILVER STAR



*LEGION OF MERIT

*DISTINGUISHED FLYING
CROSS

SOLDIER'S MEDAL



*BRONZE STAR MEDAL



*AIR MEDAL

COMMENDATION RIBBON
WITH METAL PENDANT

*PURPLE HEART



MEDAL OF FREEDOM

SERVICE RIBBONS



GOOD CONDUCT MEDAL

*CIVIL WAR CAMPAIGN
MEDAL

INDIAN CAMPAIGN MEDAL



*SPANISH CAMPAIGN MEDAL

ARMY OF CUBAN OCCUPATION
MEDALARMY OF PUERTO RICAN
OCCUPATION MEDAL

*PHILIPPINE CAMPAIGN MEDAL

PHILIPPINE CONGRESSIONAL
MEDAL

*CHINA CAMPAIGN MEDAL



*MEXICAN SERVICE MEDAL



*WORLD WAR I VICTORY MEDAL

ARMY OF OCCUPATION
OF GERMANY MEDAL*AMERICAN DEFENSE SERVICE
MEDALWOMEN'S ARMY CORPS
SERVICE MEDAL

*AMERICAN CAMPAIGN MEDAL

*ASIATIC-PACIFIC CAMPAIGN
MEDAL*EUROPEAN-AFRICAN-MIDDLE
EASTERN CAMPAIGN MEDAL

*WORLD WAR II VICTORY MEDAL



*ARMY OF OCCUPATION MEDAL



*MEDAL FOR HUMANE ACTION

*NATIONAL DEFENSE SERVICE
MEDAL

*KOREAN SERVICE MEDAL



*ARMED FORCES RESERVE MEDAL

DRAWN FOR ENCYCLOPEDIA BRITANNICA, INC., BY GEORGE ARMSTRONG

U.S. ARMY DECORATION AND SERVICE RIBBONS

*Decorations and ribbons common to all branches of the armed forces
DECORATIONS IN ORDER OF PRECEDENCE.—(First row) *Medal of Honor*: For conspicuous gallantry and intrepidity in combat. *Distinguished Service Cross*: For extraordinary heroism in combat. *Distinguished Service Medal*: For exceptionally meritorious service in a duty of great responsibility. *Silver Star*: For gallantry in action not warranting the award of either the medal of honor or the distinguished service cross. (Second row) *Legion of Merit*: For exceptionally meritorious conduct in performance of outstanding services. *Distinguished Flying Cross*: For heroism or extraordinary achievement while participating in aerial flight. *Soldier's Medal*: For noncombat heroism. *Bronze Star Medal*: For heroic or meritorious service, not involving participation in aerial flight, against an armed enemy. (Third row) *Air Medal*: For meritorious achievement while participating in aerial flight. *Commendation Ribbon With Metal Pendant*: For meritorious achievement or meritorious service. *Purple Heart*: For wounds received in action. *Medal of Freedom*: For a meritorious act or service in combat, when the award of any other decoration is deemed inappropriate. **SERVICE RIBBONS.**—(Fourth row) *Good Conduct Medal*: For exemplary behaviour, efficiency and fidelity in an enlisted status.

Civil War Campaign Medal, 1861–66. *Indian Campaign Medal*, 1865–91. *Spanish Campaign Medal*: Cuba, Puerto Rico, Philippines, 1898. (Fifth row) *Army of Cuban Occupation Medal*, 1898–1902. *Army of Puerto Rican Occupation Medal*, 1898. *Philippine Campaign Medal*, 1899–1913. *Philippine Congressional Medal*: For serving beyond date of normal discharge from Spanish-American War service. (Sixth row) *China Campaign Medal*, 1900–01. *Mexican Service Medal*, 1914–19. *World War I Victory Medal*, 1917–20. *Army of Occupation of Germany Medal*: Germany or Austria-Hungary, 1918–23. (Seventh row) *American Defense Service Medal*, 1939–41. *Women's Army Corps Service Medal*, 1942–45. *American Campaign Medal*, 1941–46. *Asiatic-Pacific Campaign Medal*, 1941–46. (Eighth row) *European-African-Middle Eastern Campaign Medal*, 1941–45. *World War II Victory Medal*, 1941–46. *Army of Occupation Medal*: Germany, Austria, Italy, Japan, Korea, 1945–52. *Medal for Humane Action*: Berlin air lift, 1948–49. (Ninth row) *National Defense Service Medal*, 1950–. *Korean Service Medal*, 1950–. *Armed Forces Reserve Medal*: For ten years' honourable service in a reserve component

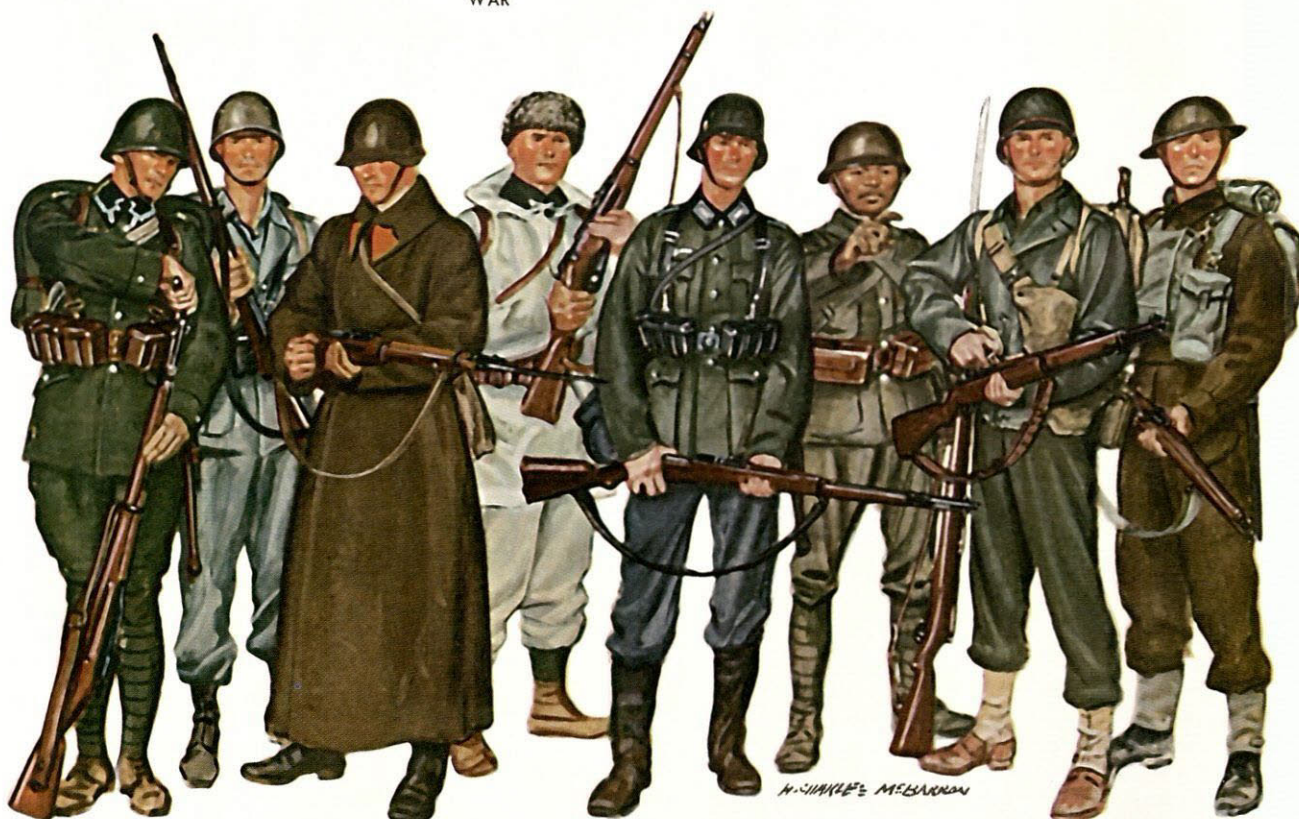
UNIFORMS



FRANCO-PRUSSIAN WAR

SPANISH-AMERICAN WAR

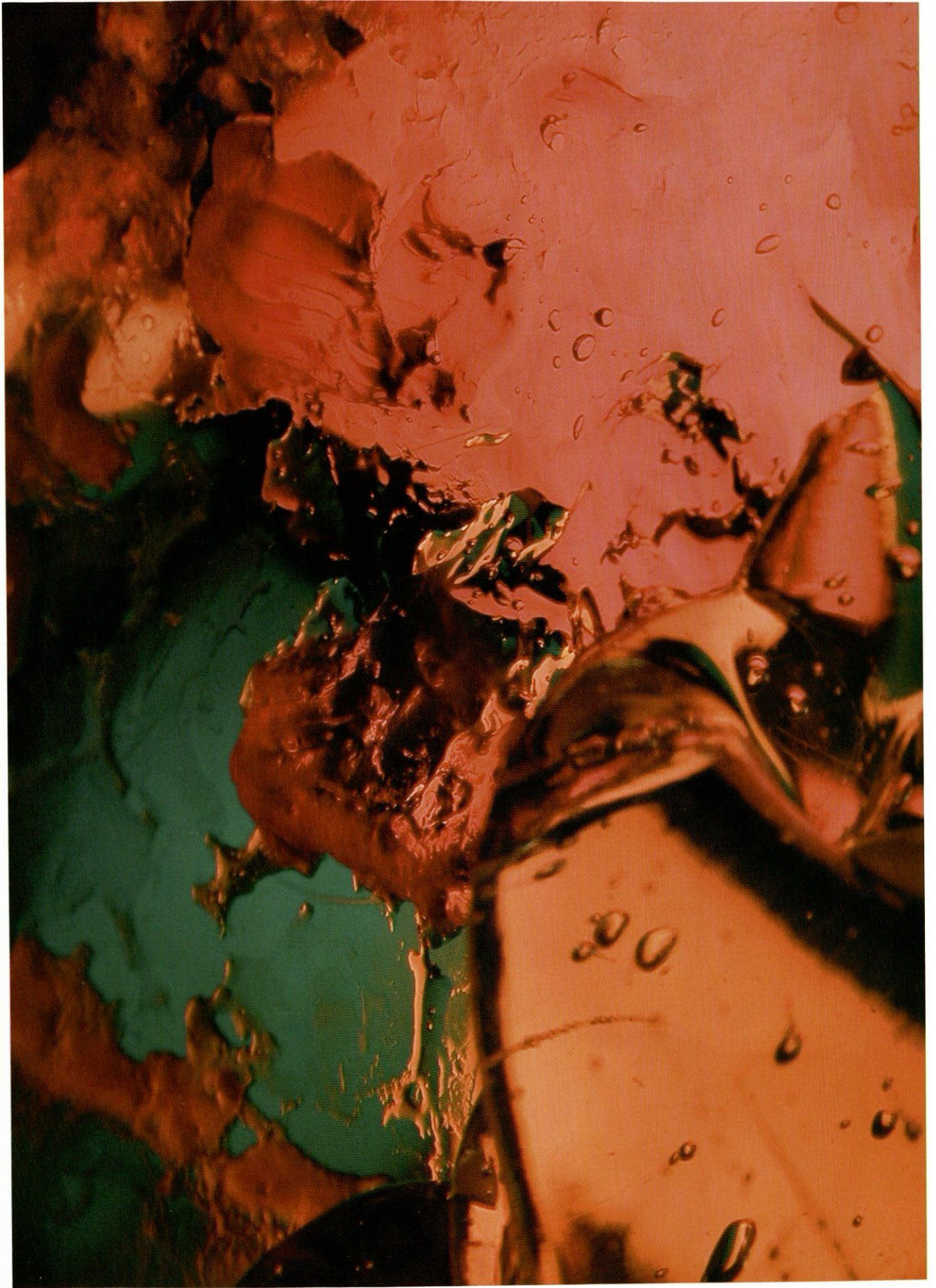
WORLD WAR I

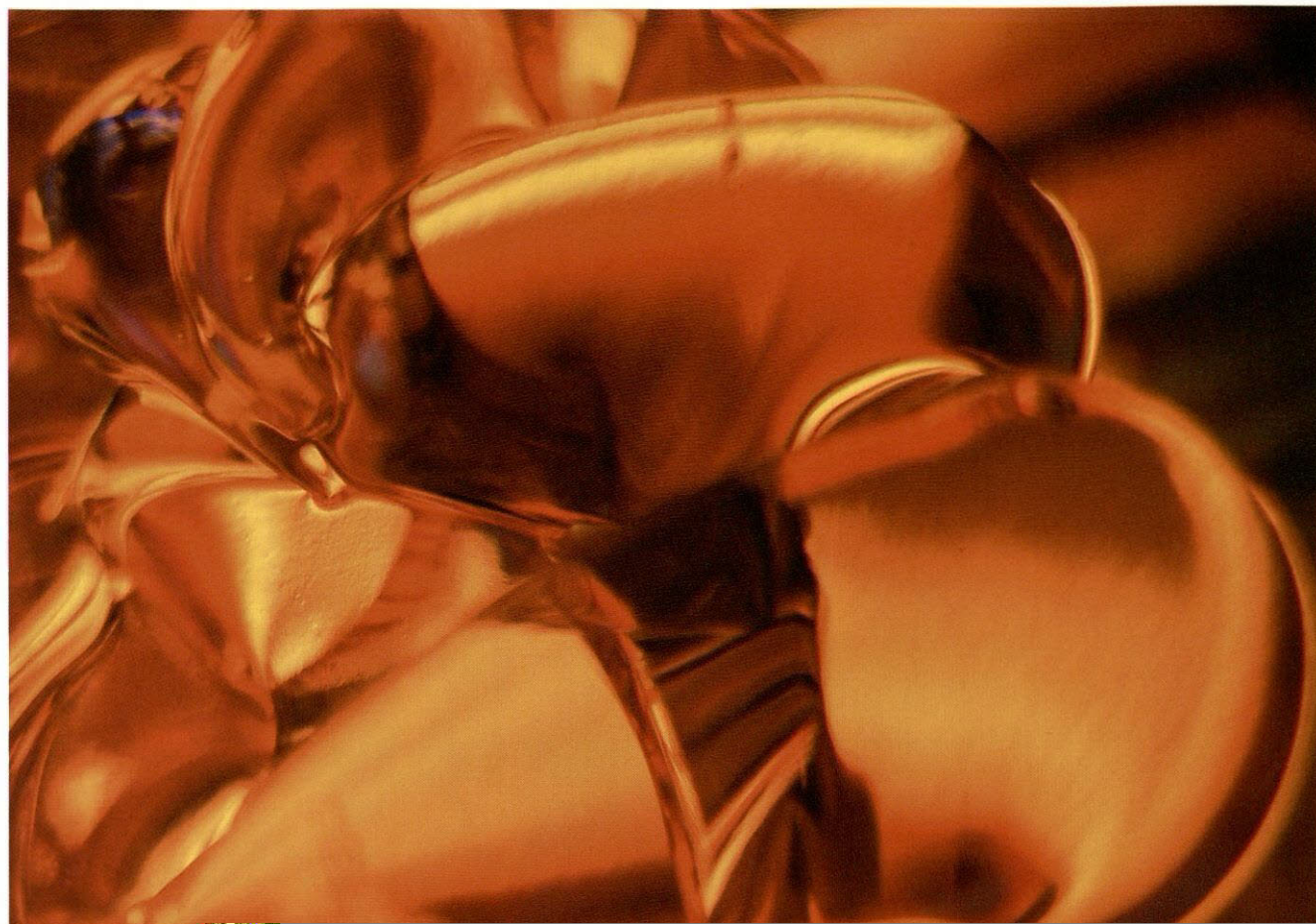


WORLD WAR II

UNIFORMS OF THE 19TH AND 20TH CENTURIES

Franco-Prussian War: French infantry; Prussian infantry. Spanish-American War: Spanish regular infantry; U.S. infantry. World War I (infantry): German, 1916-18; U.S., 1917-18; French, 1916-18; British, 1916-18; Italian, 1916-18. World War II (infantry): Polish, Italian, Russian, Finnish, German, Japanese, U.S., British



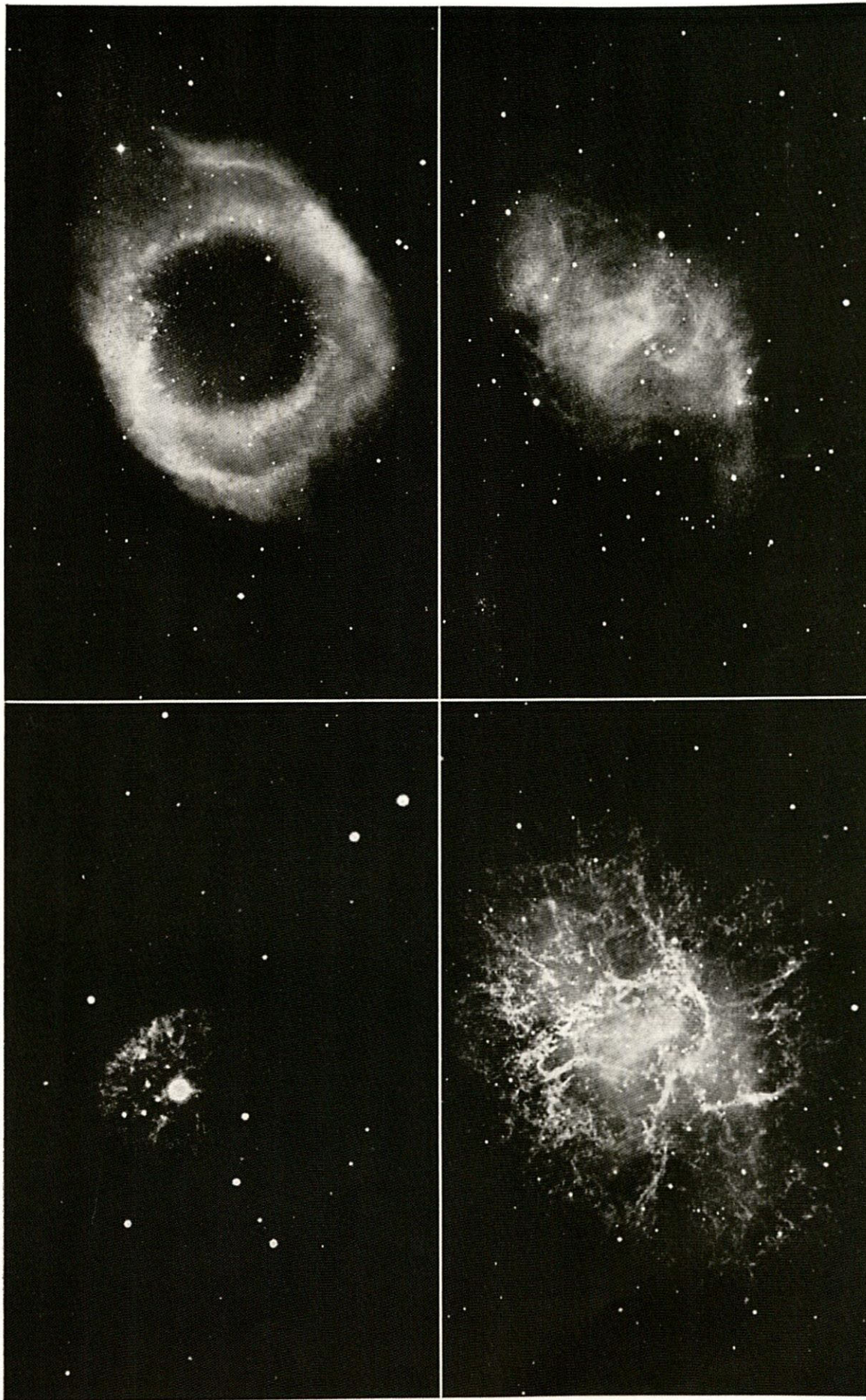




PHOTOGRAPHS, FAIRCHILD AERIAL SURVEYS, INC.

NEW YORK'S MIDTOWN SKYSCRAPERS

1. Aerial view of New York city showing midtown Manhattan with the RCA building at the upper left and the spire of the Chrysler building and the Queensboro bridge in the background at the upper right
2. Aerial view of New York city showing 34th St. neighbourhood with the Empire State building in the centre. The street slanting across the lower left is Broadway



BY COURTESY OF THE MOUNT WILSON AND PALOMAR OBSERVATORIES

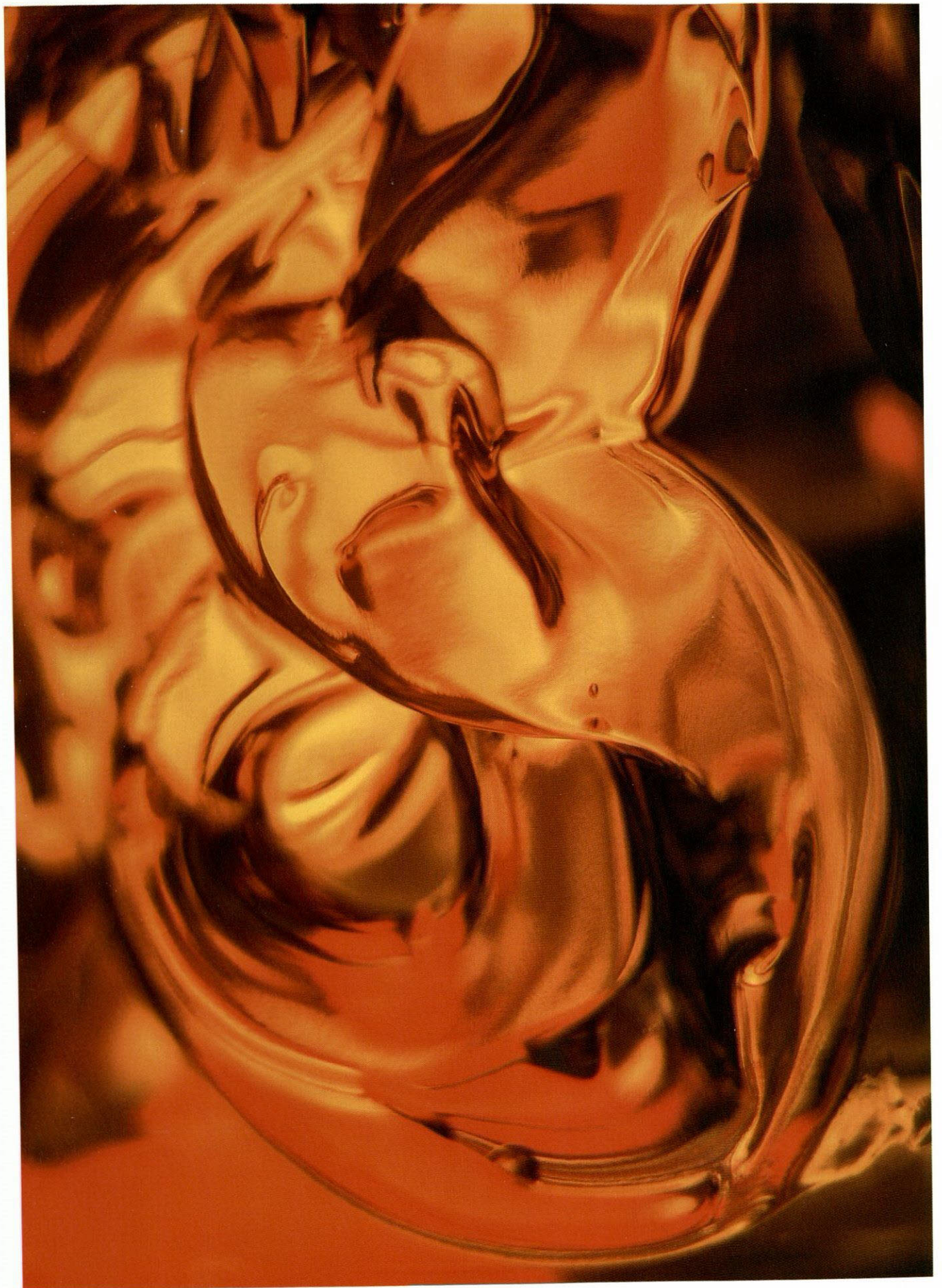
EXPANDING GALACTIC NEBULAE

Top left: Nova Persei (1901) and its expanding nebula photographed in red light. A common nova which erupted in 1901 and is expanding 400 mi./sec., is 1,500 light-years distant.

Top right: Helix nebula (N.G.C. 7293) in Aquarius, the largest known planetary nebula, a ring of gas made luminescent by the strong ultraviolet radiation from central, very hot stars. As suggested by the appearance of inner filaments, the gases are moving radially outward, with a speed of a few miles per second.

Bottom: Crab nebula (N.G.C. 1952 M1) in Taurus photographed in red (left) and yellow (right) light.

This is the gaseous remnant of the galactic Supernova of A.D. 1054 observed by the Japanese and Chinese. It was seen in daylight and was visible in the night sky for almost two years. The nebula is 5,000 light-years away and expanding 700 mi./sec.; it is a bright radio source, and part of its light is polarized. The red light photograph shows the highly filamentary structure in the light of hydrogen, oxygen, nitrogen and neon gases; the yellow light photograph indicates the amorphous and diffuse cloud of polarized light, believed to be produced by high-energy electrons accelerated in a magnetic field (synchrotron radiation).



Trick
of the
I

OBSERVATION AND INVENTION IN JEFF GIBSON'S
SARSAPARILLA TO SORCERY

JEFFREY KASTNER

All perceiving is also thinking, all reasoning is also intuition, all observation is also invention.
—Rudolf Arnheim, *Art and Visual Perception*, 1954

Though the world of art and its attendant industries are ineluctably bound up with the physiology and psychology of vision, the knotty questions about how perceptual information is processed and instrumentalized figure into contemporary critical discourse less than one might expect. I can think of any number of more or less plausible explanations for our scant engagement with such a basic aspect of aesthetic experience: from a lingering Duchampian disdain for anything that remotely smacks of the “retinal,” to a general turning away from investigations of individual consciousness toward more outward-tending (superficially, at least) relational modes of activity, to simple befuddlement about the wildly intricate mechanics of the human sensory apparatus. Yet at the same time, everyone obviously understands that, on a fundamental level, any discourse about visual art necessarily begins with looking at, and then thinking about, objects and images. And that really *looking* at something involves much more than simply seeing it.

How do I understand what I see? Do you see things, and understand them, in the same way I do? What operations govern the processes we use to assign meaning to what we see? How do we arrive at a consensus about, and subsequently objectivize, the knowledge we draw from our subjective observations?

These sorts of Big Questions about perception and knowledge, as enigmatic as they may seem, continue to buzz around our experience with visual culture, as they have since they were first asked by philosophers in antiquity. Today, neuroscientists declare that the nature of visual perception is not just some routine interaction between energetic particles and the eye, and that activities that lead to and flow from the act of vision—and the conceptual connections we make based on the information they produce—are constitutionally contingent, full of skips and gaps, and dependent on a complicated mix of both external (objective) data and an internal (subjective) interpretive framework. This dance between object and subject isn’t a distraction from the rigors of content or a drag on pleasure—it’s central to both. And whether you get at it via classical aesthetic philosophy, through some form of Gestalt theory such as that espoused by Rudolf Arnheim, or in the context of the many branches of contemporary cognitive neuroscience, the matrix of observation and invention that is our sensorium—at once destabilized and enriched by pervasive slip-pages and elisions, suffused with a kind of poetry of provisionality—remains an undeniably generative platform for creative activity.

* * *

In essence, Jeff Gibson's *Sarsaparilla to Sorcery*—the strategic taxonomic pairing of the images presented on the preceding pages, one set of which was produced by the artist, and the other appropriated from gorgeous old volumes of the *Encyclopædia Britannica*—is another chapter in an ongoing artistic investigation into the relationship between appearance and reality, between individual forms and the meanings they acquire in classificatory aggregation and dissemination. Gibson's work throughout the 1990s, for example, frequently trafficked in the signs, symbols, and design environment of those ur-aggregators, popular media and consumer culture, where the whole by definition must be something different from the sum of its parts, where what you see is almost certainly not what you get. For Gibson, the ceaseless migration of such stimuli (or perhaps *overstimuli*, given the milieu) from the specific to the general mirrors the relationships of individuals to larger social structures such as language, the media, and political discourse.

Gibson likes to tinker with the order of things, to get inside systems to see how they work and, if possible, leave a little theoretical monkey wrench as a calling card. Dismantling and reassembling the raw materials he extracts from various informational schemata, he gives physical substance to thought experiments designed to unsettle the normative ways in which context collaborates with image to produce meaning. The work in this book is perfectly in keeping with these aspects of the Australian-born, New York-based artist's program. In its details and method, it represents a logical apotheosis of much of his work to date: The glowing, multihued photographic abstractions with which he has lately been experimenting are here married to an informational structure that has much in common with another prominent thread in his work, namely his language-based projects like *Dupe: A Partial Compendium of Everyday Delusions*, which stages unlikely linguistic collisions to comment on states of socio-technological anxiety, bureaucratic psychoses, and crises of identity.¹ The system Gibson has infiltrated with *Sarsaparilla to Sorcery* is the familiar knowledge system of the encyclopedia; the spanner in the works is his own photography.

The polarized elements of *Sarsaparilla to Sorcery* were first seen in a two-person exhibition that featured Gibson and photographer/filmmaker Charles Brown, held at the New York Academy of Sciences in early 2005. Gibson's images, shot with digital cameras using macro lenses, depicted frame-filling expanses of transparent and translucent substances through which artificial light sources were projected. At the time, Gibson observed of his pictures—shown at NYAS under the title "Concretessence"—that "they distill the swirling wash of electronic emissions (think of traffic lights, illuminated advertisements, movie trailers, and the molten ooze of TV bumper

graphics) into iridescent spectacle—a concrete cultural essence." This distillation of the light and activity of the modern techno-social environment into photographic abstractions managed to complicate the resonance of the information they contained even as it simplified its structure and disguised its specificity. Though some of these images were shown as discrete works of art or presented in geometric grids displayed in light boxes, the centerpiece of Gibson's exhibition consisted of a large table in NYAS's Tudor-style library, bearing numerous open volumes of the *Encyclopædia Britannica* into which his images had been inserted. This provided an invitation to consider the photos not as cloistered objects but, rather, as part and parcel of our existing cultural image set, with all the comparative connotations such a context implies.

With the photos and the encyclopedia now officially grafted together under the imprimatur of this book, they propose even more emphatically the forms of association and transference to which "Concretessence" alluded. *Sarsaparilla to Sorcery* asks viewers to open themselves to the possibility not only that ostensibly disparate things might actually have more in common—and in more ways—than first impressions suggest, but also that the very cognitive templates that we use to form these impressions are themselves deeply contingent things.

The parameters that governed Gibson's choices for combining the original images with the found ones include color, shape, and compositional consonance. On one spread, an image of what appears to be an elegant blue and amber bubble sits next to a page depicting and denoting different forms of chemical luminescence, producing a graceful marriage of tonalities; on another, a typology of bird eggs is slyly paired with a distinctly yolky swirl of color; while yet another twins a series of black-and-white photos of nineteenth- and twentieth-century American authors with a pool of cool silver-gray liquid light whose own cellular form mimics the pictorial grid. And is that the fortuitous silhouette of an orangutan's head gurgling forth from the golden eddies in Gibson's companion image for the "Primates" page? Or is our visual perception of the seemingly disorganized information in the photograph forced toward a particular interpretation because of the context in which it is situated?

The fact is that, as is the case with all our visual perception, it's a little of both. As with familiar pareidolic phenomena, from that famous slice of toast bearing the image of the Virgin Mary to the parade of zoo animals in the clouds of a summer afternoon, our visual impressions are remarkably mutable and responsive to suggestion. Gibson's pairing of his lambent, evocative abstractions with images chosen specifically by the makers of the encyclopedia to represent and dramatize the supposedly hard and fast

stuff of concrete reality subtly but thoroughly drives this point home. It disturbs the balance between the familiar and the unfamiliar—both in the discrete moments of the individual spreads and in the broader cadences of the entire book. And eventually, the deformations of visual meaning generated by such displacements begin to melt around both the specific “artistic” artifacts and the general “scholarly” contextual environment in which they are made to reside. It’s a neat trick that manages to tack both ways: at once organizing the disorganized information of the abstract and disorganizing the organized information of the real, to the lyric benefit of both.

* * *

Part of the pleasure, and the challenge, in a work like *Sarsaparilla to Sorcery* is tracking the various connections it makes with the often warring worlds of science, psychology, and philosophy. Indeed, the most intriguing scholarship I encountered while doing research for this essay operated at the intersection of all these disciplines, often combining contemporary scientific debate over the neurobiological processes of visual data gathering, psychological assessments of the ways our individual experience influences the way we organize that data and turn it into usable information, and philosophical meditations on what this might conceivably tell us about our existential

condition. It’s precisely the junctional nature of this sort of discourse that continues to fascinate thinkers at the cutting edge of such fields and, I believe, to inspire artists like Gibson, all of whom are traveling their own paths in search of answers to the same basic question: How does the nature of individual consciousness shape our relationship with our material and social environments?²

It is fitting that Gibson has chosen the encyclopedia as the physical and theoretical “container” for *Sarsaparilla to Sorcery*. A signal physical manifestation of the basic human desire to condense disparate information into what we think of as knowledge, the encyclopedia—with its syntax of objective data and representative images organized according to highly subjective criteria—is a perfect format for Gibson’s intervention. After all, Denis Diderot and Jean le Rond d’Alembert’s *Encyclopédie* (1751–72), perhaps the first attempt at a comprehensive body of exposition regarding art and science, prominently featured a kind of protoflowchart that described human knowledge as the product of three essential operations: Memory, Reason, and Imagination. It’s a remarkably resonant trio, one that foregrounds, as does *Sarsaparilla to Sorcery*, the complex interplay—sometimes compatible, sometimes conflicting—between external stimuli and internal analysis, between the eye and the I, in the processes through which we make sense of the world around us.

JEFFREY KASTNER is a New York-based journalist and critic. A regular contributor to *Artforum* and the *New York Times*, he is also senior editor of *Cabinet* magazine.

NOTES

1. Originally published as an artist’s book in 2000 and still on the Web at www.everydaydelusions.com, *Dupe* sees Gibson channeling Ambrose Bierce by creating an updated *Devil’s Dictionary* for our DSM-driven age.

2. The issues under discussion here obviously have a philosophical pedigree—from Plato to Descartes to Bishop Berkeley and David Hume to Bertrand Russell and beyond—far too extensive to address properly here. Since many will be familiar with the classical literature on the relationship between perception and reality, I’ll mention just a few of the many interesting (if often dauntingly technical) examples from the contemporary literature on perceptual theory that I found especially helpful: Nick Chater, “Reconciling Simplicity and Likelihood Principles in Perceptual Organization,” in *Psychological*

Review 103, no. 3 (1996); Nick Chater and Ulrike Hahn, “Concepts and Similarity,” in *Knowledge, Concepts and Categories*, Koen Lamberts and David Shanks, eds. (Hove, England: Psychology Press, 1997); Susanna Siegel, “The Contents of Perception” (2005), in *Stanford Encyclopedia of Philosophy*, online at plato.stanford.edu/entries/perception-contents; Laurence Bonjour, “Epistemological Problems of Perception” (2001), in *Stanford Encyclopedia of Philosophy*, online at plato.stanford.edu/entries/perception-episprob; and Charles McCreery, “Perception and Hallucination: The Case for Continuity” (Oxford: Oxford Forum, 2006). Notable books of more general interest on similar topics include Gyorgy Kepes, *Language of Vision* (Chicago: Paul Theobald, 1944); Donald D. Hoffman, *Visual Intelligence* (New York and London: W. W. Norton & Co., 1998); and Stewart Guthrie, *Faces in the Clouds: A New Theory of Religion* (New York and Oxford: Oxford University Press, 1993).

JEFF GIBSON was born in 1958 in Brisbane, Australia. He attended the University of Southern Queensland from 1977 to 1980, studying journalism, modern history, and the visual arts. In 1981 he moved to Sydney, where he co-managed two artist-run galleries—Art/Empire/Industry (1981) and Union Street Gallery (1985–86). After completing graduate studies in the painting and print media departments at Sydney College of the Arts (1984–85), he taught in both departments for several years. Exhibiting in group and solo shows throughout the 1980s and '90s, Gibson's work has consistently straddled high and low cultural contexts, employing modes of address ranging from installation works for art galleries to anonymous street-poster campaigns. In 1988 he joined the staff of *Art & Text* magazine, serving as senior editor from 1994 until 1998, at which time he moved to New York to work for *Artforum* magazine, where he is currently managing editor. Since relocating to New York he has published an artist's book, *Dupe: A Partial Compendium of Everyday Delusions*, and associated website, www.everydaydelusions.com; presented a work on the Panasonic screen in Times Square as part of Creative Time's "59th Minute" program; and exhibited at the New York Academy of Sciences. His critical writing has appeared in numerous publications, including *Artforum*, *Bookforum*, *Flash Art*, and *Art & Text*.

This book presents thirty artworks, each consisting of an original photograph presented alongside a page from the *Encyclopædia Britannica* (ca. 1950–70) that the artist has scanned and reprinted. The artwork consists of this combination, and it is the artist's intention that neither element be exhibited without the other.

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