

The Renaissance (16th and 17th centuries)

The Renaissance in Europe (which began in Italy) was a period that ended with a veritable scientific revolution. Completely new theories emerged, calling into question the way man saw the world and his place in it.

In fact, what is commonly referred to as the Renaissance began much earlier in Italy and Avignon than in the rest of Europe (the word was only beginning to spread), and especially in France, which remained affected for a long time by the upheavals of the Hundred Years' War. As early as the 14th century (Trecento), Renaissance centers appeared in Venice, Siena, Florence and Rome, and even more so in the 15th century (Alsace, Burgundy, Portugal, etc.).

There are many reasons for this Renaissance, such as :

- The rediscovery in the XIIIe century of ancient texts (Aristotle) preserved and enriched by the Arabs.
- The invention of paper (imported from China),
- The invention of the printing press (1453) (also imported and improved by Gutenberg) made it possible to distribute books in greater numbers and, above all, to publish books in vernacular languages instead of Latin, thus spreading culture,
- Progress in geography and cartography,
- Technical advances in navigation and positioning (compass),
- The contribution of Byzantine knowledge, following the decline and final collapse of the Byzantine Empire in 1453,
- Expansion of maritime exploration around the African continent (Portuguese), then to the New World,

The scientific and technical advances of the Renaissance, along with the revival of other fields (art), were one of the causes of the extraordinary period of exploration by European navigators, first Portuguese and Italian, then Spanish and French, known as the Great Discoveries, which enabled Europe to secure world supremacy.

1. The birth of botany

Otto Brunfels (c. 1488-1534)	nicknamed the father of botany, published his <i>Herbarum vivae icones</i> in 1530 and 1536. In this work, illustrated with excellent woodcuts, Brunfels describes all the plants he knows. He begins his descriptions with a list of names in different languages, followed by quotations from other ancients. He ends by giving his own assessment of the plant and its powers, the work having, like all botanical books of the time, a therapeutic vocation.
Leonhart Fuchs (1501-1566)	published his important work <i>historia stirpium</i> in 1542, in which he described over 400 species. His superb illustrations were to be used many times thereafter. He describes each plant according to a predefined pattern: first, its shape, then its inhabitant, its seasonality (when the plant should be picked), its temperament and its powers. It should be noted that he describes decorative plants that have no therapeutic use.
Andrea Cesalpino (1519-1603)	can be considered the man who established botany as an independent science. He provides a comparative analysis of anatomical forms and definitions of his concepts. He investigated the difference between plants and animals: he drew comparisons between the organs of nutrition of plants (roots) and animals (stomach and intestines). Cesalpino's system was the first to be truly based on the comparative study of anatomical shapes.
Prospero Alpini (1553-1617)	demonstrated in 1592 that the palm needs pollen to be fertilized.
Gaspard Bauhin (1560-1624)	with his <i>Prodromus</i> and <i>Pinax theatri botanici</i> , made the first

	attempt at a critical compilation of botanical knowledge. He grouped plants according to their affinities.
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2. The first zoologists

Guillaume Rondelet (1507-1566)	a doctor in Montpellier. -In 1555, he published his <i>Universae aquatilium pars altera</i> , in which he presented all the aquatic animals he knew. -He adds many fine personal observations.
Pierre Belon (1517-1564)	-He is the author of <i>L'histoire naturelle des étranges poissons marins</i> and description of Dolphin and several others of its kind

3. The encyclopaedists

Conard Gessner (1516-1565)	-Published his <i>Historia animalium</i> in Zurich between (1551 and 1558). -He compiles all the knowledge he has about animals. -It presents these, organized alphabetically. -His richly illustrated work was reprinted many times over more than three centuries.
Ulisse Aldrovandi (1522-1605)	-Published the first four volumes of a natural history from 1559-1605. -This naturalist still reveres Antiquity, and gives as much credence to Strabo and Pliny as he does to his own observations.

4. The birth of scientific anatomy

Leonardo da Vinci (1452-1519)	-Practiced cadaver dissection and produced numerous anatomical sketches.
André Vésale (1514-1564)	-A doctor and anatomist from Brussels. -His <i>De humani corporis fabrica</i> is a compendium of descriptive anatomy that revolutionized the anatomical knowledge of his time.
Bartolomeo Eustachi (1510-1574)	An Italian anatomist and physician to whom we owe a host of anatomical discoveries in the systems of bones, muscles, nerves and veins. -He also discovered a canal that got his name, the Eustachian tube.
Gabriele Falloppio (1523-1562)	-was an Italian surgeon and anatomist whose work described numerous organs, including hearing, secretory apparatus and reproductive organs. -For example, he discovered the fallopian tubes that connect the ovaries to the uterus.