Galaxies are gigantic swarms of billions of stars with vast clouds of gas and dust.

Until a century ago, we knew of only one galaxy — our Milky Way Galaxy. Though galaxies are enormous, they are at immense distances from us, and astronomers used huge telescopes to see them clearly. We now estimate there are perhaps a hundred billion galaxies in the universe in a variety of sizes and shapes.

Deep Sky Catalog (1774)

while searching for comets, Charles Messier compiled a catalog of deep-sky objects he thought might be mistaken for comets.

Spiral Nebulae (1845)

Using hydrogen-emitting features, Williamina Fleming was able to identify a previously unknown class of galaxies.

The great debate (1912)

Announced at Harvard Observatory, this battle pitted Edwin Hubble against Heber Curtis on whether the galaxies were part of our Milky Way Galaxy or an independent collection of stars.

Galaxy shapes (1936)

Edwin Hubble, who showed these observations to be galaxies, is also the first to identify galaxy shape families.