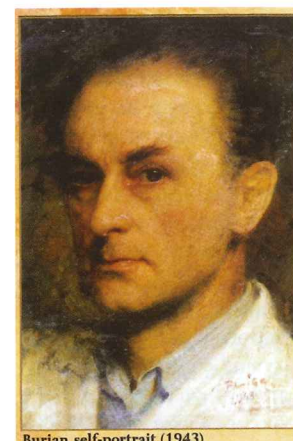
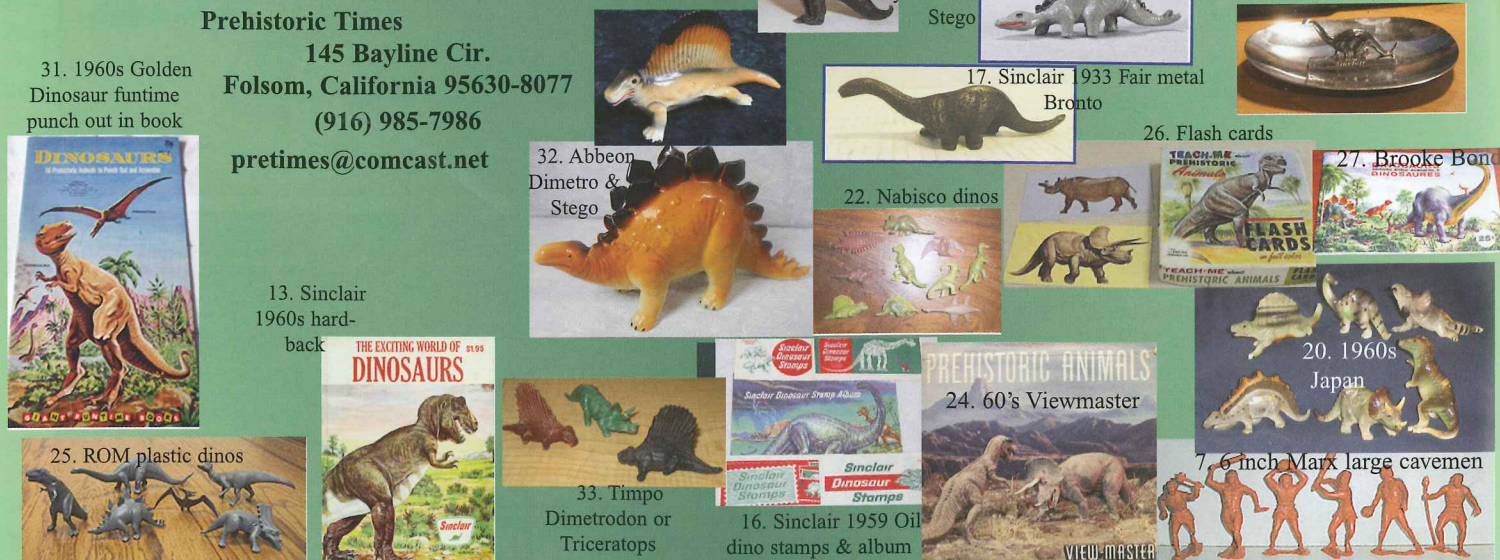


1. "Dinosaur Collectibles" price guide co-written and signed by PT editor \$49
2. Linde 1950s Coffee Premium plastic dinosaur figs 7 from Austria. \$12ea.
3. Rare 8th Linde figure to complete above set: Rare Rhamphorhynchus \$45
4. Marx orig. sm/med 50s/ 60s dinosaur toy figs (green, brown, gray) \$5
5. Marx orig. Krono, T-rex (pot-belly or slender) \$39, Brontosaurus \$34
6. Marx original second series dinos/mammals \$12 each, set of 8 - \$79
7. Marx 45mm cavemen (6 diff) \$7 ea Marx 6" cavemen (6 diff) \$15 ea.
8. Multiple (MPC) dinosaur plastic figures many colors \$5-10 each (inquire)
9. JH Miller waxy plastic 50s Tricer, Mammoth/Mastodon or Stego \$65
10. JH Miller Bronto (complete) \$79, Rare Pterodactyl (broken feet) \$89.
11. JH Miller Rare small Dimetrodon (one broken foot) Stands fine \$49
12. Sinclair 1960s green plastic 10" brontosaurus bank \$24
13. Sinclair 1934 Dinosaur book \$25 & Sinclair 1964 Worlds Fair booklet \$15
14. Sinclair 60s colorful Hardback "The Exciting World of Dinosaurs" \$44
15. Sinclair hollow dinosaurs 64 NY World's Fair dinos in several colors @ \$35
16. Sinclair rare hollow NY Worlds Fair Brontosaurus looking backward \$66
17. Sinclair album and complete stamps set 1935 \$35 or 1959 \$20
18. Sinclair 60s solid Worlds Fair dinos (6 diff. various prices) (bagged set \$89)
19. Sinclair Oil 1960s dino chrome metal tray OR metal 1933 fair Sinclair bronto \$69 ea.
20. SRG sm. Caveman, Dimetrodon, pterosaur or Plesiosaur \$59 ea.
21. SRG Large metal Stegosaurus, Trachodon, Bronto, Tricer or T. rex \$69 each
22. 60's Japan Porcelain Dimetro, Stego, Bronto, T-rex or Protoceratops 5" @ \$24
23. Nabisco silver prehistoric mammal cereal premiums 60s \$10 ea. All 8 \$75
24. Nabisco/Fritos dinosaur premiums, gray (60s) \$5 each, 50s green & red \$10
25. ROM (Royal Ontario Museum) plastic dinosaur figs. \$15 ea, Pteranodon \$25
26. View Master Prehistoric Animals 1960s comp. 3 reels/booklet nm \$24
27. Ultra Rare Chialu Italian 1950s resin Ankylosaurus figure in great shape \$139.
28. Teach Me About Prehistoric Animals Flash cards 1960s \$45
29. Brooke Bonde 60s dinosaur trading album w/ set of cards attached \$49
30. Pyro white box MIB dinosaur model kits, Proto, Stego, @ \$39
31. Palmer 1960s Mastodon skeleton or Brontosaurus skeleton \$39 each MIB
32. Marx Linemar 1960s 1" metal dinos. T. rex, Stegosaurus or Brontosaurus \$24 ea.
33. Golden Funtime 1960s Dinosaur punch out (unpunched in book) \$95
34. Abbeon 1960s Japan bone china orange Stegosaurus or Dimetrodon 5" - \$39
35. Timpo (England) 50/60s plastic 4" Dimetrodon (black or red brown) or Triceratops \$39 ea.
36. Dinosauriana-The Essential Guide to Collectible Dinosaurs disc \$25
37. PT back issues 31, 33, 41, 42, 52, 66, 74-76, 78, 93-102, 104-115 \$8 each or \$12 each foreign. (PT issue prices include shipping) Please add \$6 shipping in U.S. • Call or e-mail me about condition.

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pretimes@comcast.net



Zdeněk Burian and the Golden Age of Palaeo-art Part 1.

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(j.lavas@auckland.ac.nz)

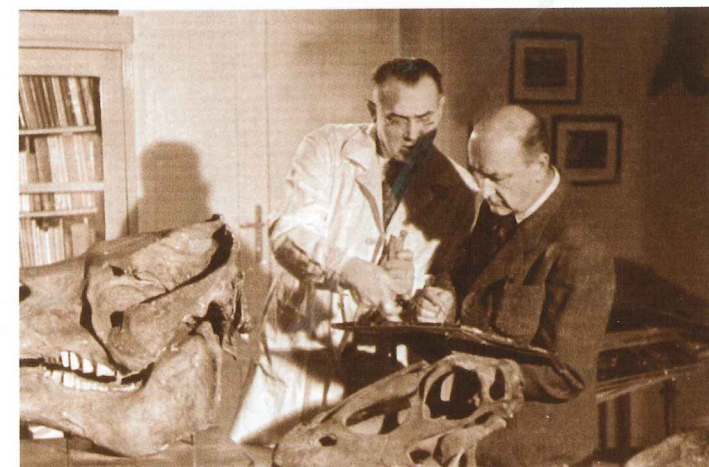
Burian self-portrait (1943)



1. Introduction

In the latter half of the 20th Century if you had asked a selection of people from around the world to imagine a prehistoric human, animal, or landscape of their choice, most respondents would have likely envisaged one of many well-known paintings by the celebrated artist Zdeněk Burian (1905-1981). This is perhaps not surprising given that Burian's remarkable career spanned six decades (from the 1930s to the 1980s) and left a legacy that will probably forever remain unsurpassed. His canvases not only reveal the hand of an artist acutely adept at depicting all stages of the Earth's prehistory and its magnificent succession of life, but the unique empathy he had for his subjects often gave the illusion that they might have been painted from direct observation. Although Burian had been preceded by (and was a contemporary of) other notable palaeo-artists, he was the first to provide a global view of prehistory that integrated accurate botanical and landscape elements with convincing palaeoreconstructions. Burian was a remarkably prolific artist. One of his scientific collaborators (Vratislav Mazák) estimated the total number of his works (for all subjects) at no fewer than 14,000. Richard Milner (former editor of Natural History magazine) estimated 15,000, while Thomas Kovacs (with whom I had corresponded, and who knew Burian's friend and art cataloguer Petr Sadecky) claimed 20,000 (this last figure is probably the most accurate). Whatever the total was, it is known with certainty that 1,110 of these works were oil paintings with the remainder in pastel, tempera, gouache, pen and ink, and pencil.

It may come as a surprise to some palaeo-enthusiasts that only a portion of this vast output related to palaeo-themes. This included 386 oil paintings, 128 works in tempera, gouache or



Josef Augusta (left) and Zdeněk Burian at Charles University.

pastel, and more than 350 pen or pencil drawings. Burian was also a natural history artist, and throughout his career he worked with numerous publishers as an illustrator of popular and technical books and periodicals. Amongst the 456 novels illustrated by him were classic titles by Jules Verne, Alexandre Dumas, Arthur Conan Doyle, Rudyard Kipling, Daniel Defoe, Robert Louis Stevenson, Vladimir Obruchev, Jack London, and James Fenimore Cooper, as well as adventure stories by Zane Grey, James Oliver Curwood, Edgar Rice Burroughs, and no fewer than 37 editions of tales by German author Karel (Karl) May set in the American West, the Orient and Middle East. He designed a further 200 book jackets and drew about 550 serialised short stories. Ethnography was one of Burian's lifelong interests and he depicted native peoples from many regions including Eastern Europe, India, Siberia, Central Asia, Africa, North and South America, Australasia, New Guinea, and the Pacific Islands. As impressive as this legacy is in its own right, it is chiefly within the realms of palaeoreconstruction that Burian is internationally celebrated.

In many ways the 1940-'60s was the Golden Age of Palaeo-art, a time during which many iconic paintings that remain familiar to us today emerged from Burian's palette to take their place amongst the historical galleries of palaeoreconstruction. Although the early series of palaeo-themed books illustrated by him and authored by Josef Augusta were initially published only in Czech, by the 1960s they were being translated into 22 languages including Russian, German, English, Chinese, French, Italian, Spanish, Japanese, Dutch, Swedish, and Portuguese, to be sold in their millions around the world. Burian's work became a defining aspect of the descriptive development of palaeontology and palaeoanthropology (both technically and in the populist view) and it is difficult to imagine these disciplines without reference to it. His art not only reflected the prevailing scientific thinking of his time, but has lost neither its lustre nor its relevance over the passing decades. Many of his early works continue to appear in 21st Century publications and he probably inspires more artists and writers today than he did in his own lifetime.

The following article and associated imagery is a tribute to Zdeněk Burian's timeless legacy to science and art. The most difficult part of assembling the images was choosing which ones to omit, but I am confident that this selection gives a worthy representation from most periods of his career. The themes of the montage images are mainly taxonomic or chronological. I would like to acknowledge three Burian enthusiasts who assisted with details and source material for this article; Thomas Kovacs for sending copies of some of Burian's lesser known works, Jan Kopecký for helpfully verifying Burian's biographical details and dates of some paintings (and sending scans of others), and Paul McFarland who kindly supplied a number of key publications from the Zdeněk Burian Museum in Štramberk.

2. The Early Years

Zdeněk Michael František Burian was born on Feb 11th 1905 to Eduard and Hermína Burian in the eastern Czech town of Kopivnice, Moravia, which at that time was still part of the Austro-Hungarian Empire (Koprivnice is an industrial town and site of the famous Tatra car and truck company). Zdeněk had one sibling, his older brother Karel. From an early age he enjoyed reading about exotic peoples in far-away lands, but his favourite pastime was

exploring the countryside surrounding the Burian family home. One area he frequented was a local mountain called Kotou Hill with its nearby caverns, one of which (Šipka cavern) had been inhabited by Neanderthals in prehis-



Burian's sketch of Kotouč Hill that was once inhabited by Neanderthals and influenced many of the backgrounds in his paintings.

toric times. Three decades later, Kotou Hill would feature prominently in Burian's own depictions of Neanderthals and their customs (solitary, strikingly-shaped hills can also be found scattered throughout his palaeontological works). Burian's artistic skills were evident at a very young age, and a painting of Zulu warriors completed when he was only 14 shows a precocious mastery in depicting the human form. Such talent did not go unnoticed by his teachers and, before his 14th birthday, he was accepted into the second year intake at the prestigious Prague Academy of Art. There he studied under Professors Jakub Obrovský, Max Švabinský and Vlaho Bukovac, as well as the tutor (subsequently Prof.) Vojtěch Hynais.

To help pay for his Academy tuition fees, Zdeněk took part-time jobs as a construction labourer and station porter, but found life very difficult being

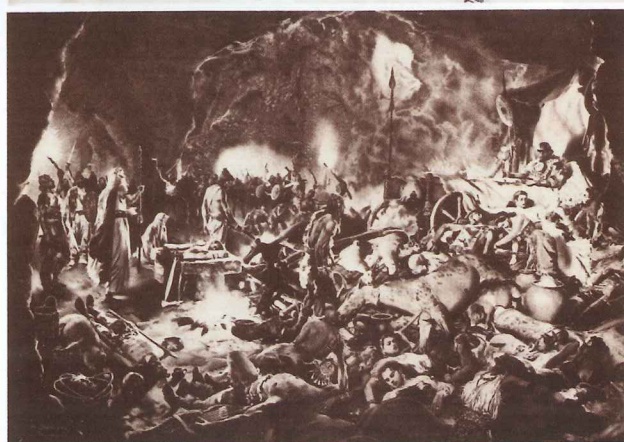
so young amongst older peers (at one point between accommodation he was sleeping under a railway bridge). After just two years of study he left both the Academy and Prague itself, and adopted a Bohemian lifestyle as an artist roaming the Czech countryside. He spent much of his time trekking around the Sázava and Berounka rivers (tributaries of the Vltava) all the while honing his artistic skills in the field. In 1921 (at the age of 16) he received a contract to illustrate his first book, *The Adventures of David Balfour* by Robert Louis Stevenson (for the publisher A. Sv. cený). Although the title was a commercial success, it was the only one he was offered that year, and he continued to struggle financially throughout much of the 1920s. In May 1922 he travelled to Slovakia and spent four months living amongst bands of nomadic gypsies on the border region along the Lpél River. This self-imposed and very austere period of his life left a lasting impression on him, and the resulting close association with nature and small nomadic communes enhanced his talent for depicting natural history and human subjects in a faithful and perceptive manner. The relatively small numbers of books that he illustrated

during the nine years following 1921 were: 1922 (5); 1923 (1); 1924 (1); 1925 (7); 1926 (1); 1927 (12); 1928 (5); 1929 (8); 1930 (8).

During 1924 and 1925 Zdeněk did his military service in the Czechoslovak army at the duty station based at Valašské Meziříčí. On Feb 14th 1927, he married Františka Loudová (b. Jan 29th 1904 in Vršovice, south east of Prague), and later that year came the birth of their only child, Eva Hochmanová-Burianová. Eva wrote a short book on her father's life work (*Zdeněk Burian - pravěk a dobrodružství*) that was published four years before she passed away in 1995. After her death, the legal owner of copyright on Burian's art passed to her son Jiří Hochman who, at the time of writing, was seeking backing to produce a comprehensive biography on his grand-



Burian's first palaeo-themed image, the Permian amphibians *Archegosaurus* and *Branchiosaurus* (1935).



Two non-palaeo-themed Burian paintings: African warriors (upper) from 1942, and a highly-detailed reconstruction of an ancient nobleman's ceremonial burial in a Moravian cavern (lower, from *The Depths of Age*, 1956).



Burian's three principal collaborators. Left to right: Josef Augusta, Zdeněk Spínar and Vratislav Mazák.

small part to the romantic-style artwork. Burian's rendering of action scenes for adventure novels displayed a subtle photorealistic quality, especially those involving sailing ships on the high seas. His evocative images of storm-lashed oceans would later add drama to a number of palaeo-themed canvases depicting marine reptiles.

Burian's first popular prehistoric illustrations were for a serialised magazine version of *Mammoth Hunters* by Eduard Štorch. Although his faunal depictions for that title were somewhat stilted and did not compare technically with his later works, it was here that he began using his special technique of mixing black and white gouache (it is said that only he knew the secret of its rendering which he did not pass on to anyone). This method became a hallmark of many of his adventure illustrations and palaeo-canvases of the 1940s and '50s, and was an ideal medium for depicting oceanic scenes in particular as it gave the impression of translucent depth.

In 1935, Burian began a series of restorations for the geological sections of *The Great Illustrated Natural History of all Three Kingdoms*. His first formal palaeo-themed image depicted two Permian amphibians: *Archegosaurus* and *Branchiosaurus* (see figure). Two other palaeo-themed paintings from that year included one of plesiosaurs and ichthyosaurs cavorting amidst the waves, and another depicted a pair of

Uintatherium and primitive horses. Although Burian's efforts at this time were still largely-based on reconstructions by other artists (the *Uintatherium* image was possibly inspired by a Field Museum mural designed by American palaeo-artist Charles R. Knight; 1874-1953), he soon began to develop his own style which became evident in the book version of Štorch's

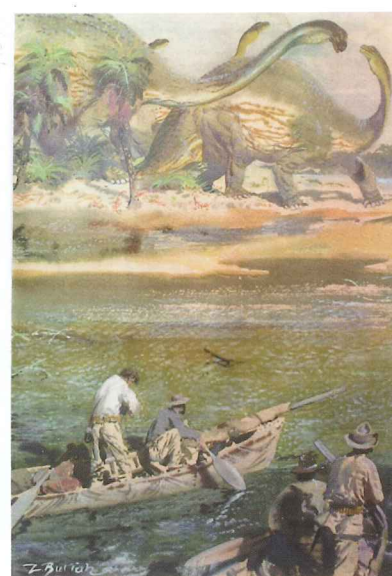
Mammoth Hunters published in 1937. It was this work that was noticed by Dr. Josef Augusta (1903-1968) of Charles University (Prague), who invited Burian to a meeting in 1938. According to Burian commentator Rostja Walica, at that meeting Augusta showed Burian a photograph of a *Diplodocus* skeleton and asked if he was able to reconstruct the animal from it, a task which Burian completed in 15 minutes. Augusta was impressed and the

two began what was to become a 30-year collaboration between artist and scientist.

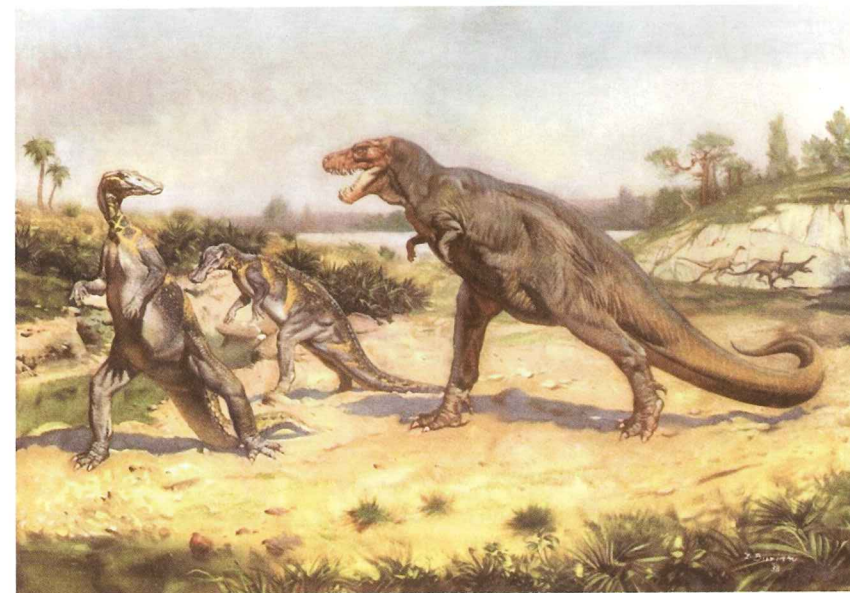
3. The Augustanian Era

Josef Augusta had originally trained as a palaeontologist and geologist at the University of Brno (1921-25) before assuming an academic position at Charles University in 1933. He was then sequentially a lecturer, Professor, and Dean of Faculty (a position he held until his death). He had around 120 scientific publications to his name but it was his authorship of popular books illustrated by Burian for which he is chiefly remembered. Augusta's greatest talent was in the popularization of science, particularly to young students. His early popular palaeontology writing was partly inspired by the works of the Austrian palaeontologist Othenio Abel (1875-1946) and the brilliant Danish artist/palaeontologist/ornithologist Gerhard Heilmann (1859-1946). It was Augusta's ability to describe any given prehistoric animal in basic layperson's terms that likely appealed to Burian who had, after all, excelled at illustrating adventure stories. Augusta was also a staunch Darwinist who viewed the progression of life through the ages in an orderly pattern that could easily be adapted to pedagogical uses. He gained a reputation as something of a benevolent supervisor who was willing to permit Burian significant artistic licence to explore romantic and neoclassical themes within his art.

In 1938, Augusta and Burian entered into contract with T&M publishers to compile a major prehistoric reference work called *Divy pravěta (The Wonders of the Prehistoric World; 1942)*. Burian's first official restoration for this title was the famous painting of a *Tyrannosaurus* lunging towards two *Trachodon* (1938), which was one of six palaeo-themed images completed that year. But the project was interrupted due to the German occupation of Czechoslovakia during which universities throughout the country remained closed. At that time the German army was requisitioning buildings in Prague including part of the apartment block in the Praha-Žižkov district where Burian was renting, and an SS officer was one of Burian's immediate neighbours. In spite of the difficult situation, the



Images from three novels illustrated by Burian. Clockwise from top left: *Plutonia* (1956), *20,000 Leagues under the Sea* (1937), and *Murderers with Head-hunters in Borneo* (1948).



The first official collaborative work of Burian and Augusta was Burian's 1938 painting of *Tyrannosaurus* and *Trachodon*, with ornithomimosaurs fleeing in the background. The tyrannosaur was later altered to give it a rugose cranium and a less flexible tail, but the resulting image was less convincing than the original.

Augusta-Burian collaboration resumed in late 1940 when the two started work on a sequential series of reconstructions of extinct life starting from the most recent geological era. T&M published the work in bi-weekly issues which readers were able to purchase literally within days of being run off the press. In parallel with *The Wonders* came production of Augusta's first narrative title *Zavátý život (The Blowed over Life; 1941)*. A number of Burian's most memorable images emerged during this period, many of which were completed in 1941. Some were colour while others were monochromatic, with the former category including the following paintings: a trio of giant *Brachiosaurus* in a deep Tendaguru lake (described by Walica as 'hyper-romantic' in style, this striking image - later slightly modified - would appear in publications over the following 60 years); an evocative depiction of a pair of armoured *Styracosaurus* emerging from a thicket; a *Stegosaurus* at the water's edge with another in the twilight background; a pair of dragon-like *Tylosaurus* at the surface of the inland Kansas Sea beneath an attendant flock of circling *Pteranodon*; a Siberian mammoth pausing to face the

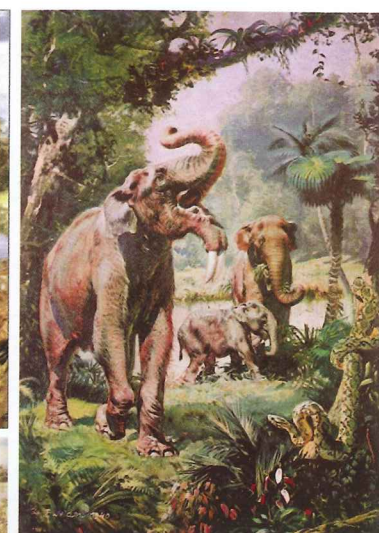
viewer as the rest of the herd lumbers across a windswept snowy tundra; and the haunting nocturnal saga of a magnificent Irish elk being pursued by wolves beneath a moon-lit sky of scudding cloud formations.

As convincing as these colour works were, it was Burian's special gouache technique for monochromatic work that enabled him to replicate what appeared to be reversed photorealism (where the artist recreates that which could never have been photographed). Some of his best-known monochrome images from 1941 include the following: a family group of the Permian therapsid *Moschops* in the barren dune-covered landscape of the South African Karroo; a rudder-tailed pterosaur *Rhamphorhynchus* triumphantly soaring past a forest canopy; the very upright solitary *Iguanodon* closely based on the series of skeletons found at Bernissart; *Ceratosaurus* menacing a *Stegosaurus* duo in a Jurassic forest glade; a rapacious *Phororhacos (Phorusrhacos)* standing over its prey, with another approaching on the Patagonian grasslands; a pair

of bi-horned *Arsinoitherium* duelling within the lush forests of the Egyptian Fayum; a trio of cumbersome *Megatherium* ground sloths foraging on the Argentine pampas; and a sabre-toothed *Smilodon* hopelessly trapped in the Californian La Brea tar pits along with the elephant *Archidiscodon*, as a flock of vultures awaits patiently nearby for both victims to expire. And finally, perhaps the most striking canvas from 1941: the epic struggle



Two famous Burian images from 1940 are *Machairodus* (above) and one of several paintings he did of *Deinotherium* (far right). This version of *Machairodus* appeared in Czech publications but was later altered for translated versions of Augusta's books to show a shorter, more robust body (inset). Some dynamism of the original image was lost as a result.



hunting of) Ice Age fauna, principally mammoths, cave bears and woolly rhinos, rank amongst the most powerful images in palaeoanthropology. Many of these paintings were included in the book *The Dawn of Man* by Josef Wolf (1978), as well as a number of smaller format Czech titles.

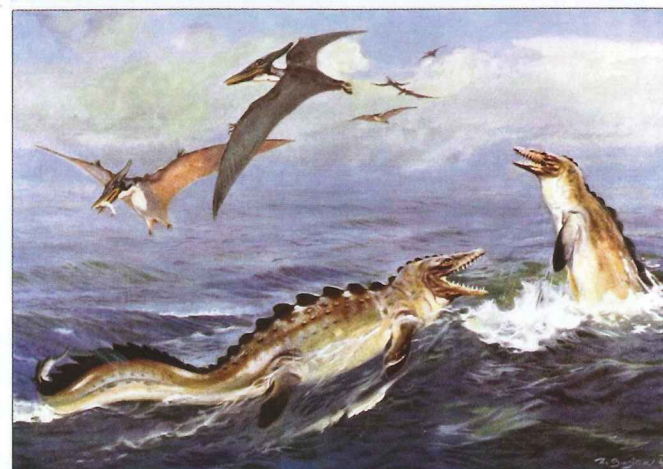
In addition to this palaeoanthropological venture, the specialists also collaborated with Augusta and Burian on

a new project in conjunction with the state education system: the so-called 'School paintings'. This was an example of Burian's art being used for social-educational purposes following the establishment of a Czech socialist government in 1948. The theories of Marxism-Leninism were regarded as conforming to those of Darwinism (both were seen as following an ordered sequential pattern of evolutionary development), and Darwinism had a

strong following in Russia, and by extension, those East European countries that came under Russian influence after WW II. The School paintings were a series of 44 large format oil paintings (1.6m X 2.4m) depicting the parade of life through the geological ages. The intention was to serialise them onto wallboards for use as visual teaching aids by schools throughout the country. These wallboards were also exported, and I recall several of them adorning the walls of the Geology Dep of our local New Zealand university in the 1980s. The first painting was completed in 1949 and the last in 1967. For some reason, the state publishing house (*Komenium*) that had been assigned to the project only printed fewer than half the total. A number of unprinted images later appeared in the first edition of the book *Life before Man* (1972), but others remained hidden. As recounted by Walica, when the Czech artist and African-adventurer Jan Skorepa (who had known Burian, and was an enthusiast of his work) located these paintings in the *Komenium* vault in the early 1980s, just 34 of the original 44 paintings were to be found. The fate of the 10 missing canvases remains a mystery to this day, but it must be assumed that they were likely taken by someone anticipating their potential value.

In 1955, Burian's artwork was utilised by a state cinematic company. In that year the celebrated Czech film-maker and animator Karel Zeman (1910-1989)

completed what is possibly his most notable production, *Cesta do Praveku* (= *Journey to the Beginning of Time*). The film proved popular in Europe and won several awards at international film festivals, but is largely unknown in the West other than a partly (and poorly) re-filmed version marketed in the US in the 1960s. Filmed at the *Klement Gottwald Studios* and



Two incomparable palaeo images completed by Burian in 1941, which represented one of his most iconic and prolific years. The upper painting showing a pair of armoured *Styracosaurus* emerging from a thicket onto the North American Cretaceous landscape has been widely copied. Enthusiasts of Karel Zeman films will recognise it from two animated models used in the 1955 feature *Cesta do Praveku* (not to mention later cinematic efforts including *The Valley of Gwangi*). Despite this ceratopsian being a popular subject amongst palaeo-artists, I have yet to see a more convincing reconstruction. Below is Burian's and Augusta's ludic concept of prehistoric drama upon the inland Kansas Sea, as one of a pair of *Tylosaurus* breaches the surface almost as if attempting to seize a low-gliding *Pteranodon* from the flock circling overhead like giant seagulls.

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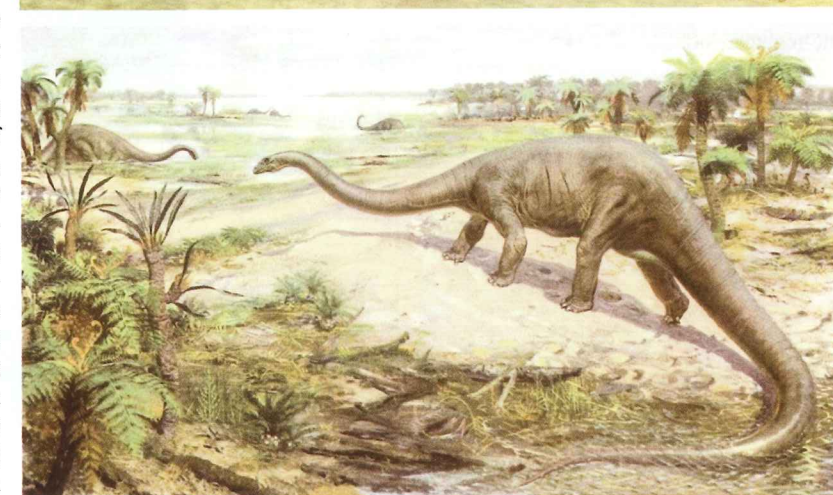
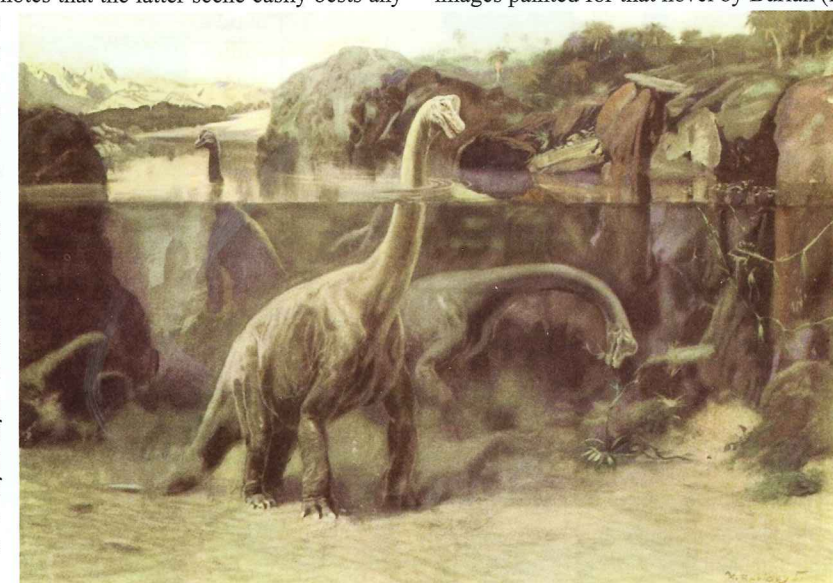
outdoor locations along the Morava River, the plot involves four boys who explore a river running through a cavern only to exit the other side into the Ice Age. As they progress downriver they encounter sequentially older types of fauna and flora until they eventually reach the Cambrian at the end of their dream odyssey. It was a very faithful production that rather cleverly integrated live action footage with stop-motion and real-time animation of 2-D and

3-D models, and had obvious associations with Arthur Conan Doyle's novel *The Lost World* (1912) and Vladimir Obruchev's more educationally-oriented tale *Plutonia* (1915). Augusta was enlisted as a technical advisor for the film, the animated sequences of which were inspired by Burian's art. Enthusiasts will note many animated models based on Burian paintings such as *Mammothus* (1941), *Deinotherium* (1940), *Uintatherium* (1955), *Phororhacos* (1941), *Pteranodon* (1941), *Styracosaurus* (1941), *Trachodon* (1938), and *Brontosaurus* (1950), amongst others. The most skilfully-animated sequences were the stop-motion flock of *Pteranodon* menacing the actors in their boat, and the *Phororhacos* pursuing the narrator (real time 2-D plus stop-motion 3-D). Walica notes that the latter scene easily bests any special effects crafted by Willis O'Brien, Ray Harryhausen or Steven Spielberg for sheer drama, and I would add that the pterosaur sequence is probably the best animated example of its type. Burian painted a monochrome image showing the four actors hiding from a passing *Ceratosaurus* (ironically, the *Ceratosaurus* and its combatant, the *Stegosaurus*, were the only prehistoric models in the film not based on Burian reconstructions, in spite of the fact that his 1941 depiction of these dinosaurs was well known; see figure). It is unknown if Burian did the painting as a promotion but it does not appear to have been used as such.

1955 was also notable for another reason. In that year Burian and Augusta entered into contract with the state publishing house *Artia* to create a series of palaeo-themed coffee-table books that would eventually be widely translated and sold internationally. The series comprised five magnificent large-format volumes and one smaller title. The first title in the series was also the most famous; *Prehistoric Animals* which was released in 1956 with 60 plates (each image facing a page of text by Augusta) ranging from the Cambrian ocean (first) to the European cave bear (last). Burian produced 14 new paintings for this book, with the remainder being School paintings



Burian painted the Siberian mammoth many times in the 1950/60s, but one of the earliest colour versions was this well-known image above (1941). The image at right (1961) reconstructs the demise of the famous Berezovka Mammoth, the partial remains of which were found in 1901 and transported to St. Petersburg where it was placed on display at the Zoological Museum.



Burian painted a number of sauropods including the famous *Brachiosaurus* trio in a Tendaguru lake (upper, 1941) which became one of the most-reproduced palaeo images of all time, and *Diplodocus* (lower, 1952), one of several depictions he did of this genus. The *Brachiosaurus* image was at one time criticised for showing animals in water said to be too deep to enable inhalation. However, physiological evidence for such claims were entirely based on human studies. In contrast, sauropods not only possessed laterally-flattened chest cavities, but it is now known that large extant animals such as elephants (and surprisingly, camels) are capable of swimming while breathing with their lungs submerged at greater depths than is possible for any human.

or images from *The Wonders of the Prehistoric World*, several of which had since been updated (including *Machairodus* and *Edaphosaurus*). Some 17 of the colour and monochrome images had been completed in 1955 including the following (in order of appearance): *Pterygotus* & *Eurypterus*; *Dinichthys* (see upper figure of *Dunkleosteus*); *Mesosaurus*; *Mastodonsaurus*; *Chirotherium* (see figure); *Stenopterygius*; *Cryptocleidus* (see figure); *Pterodactylus* (see figure); *Triceratops*; *Protoceratops*; *Corythosaurus*; *Gorgosaurus* & *Scolosaurus* (see figure); *Uintatherium*; *Indricotherium* (see figure); *Eohippus*; *Mesohippus*; and *Merychippus*.

The second title of the series, *Prehistoric Man* (1960), followed the same design format and featured 42 Burian paintings. This was succeeded in 1961 by *Prehistoric Reptiles and Birds* which was a much smaller, slim edition with 31 paintings. This title was largely devoted to *Archaeopteryx*, *Hesperornis*, and pterosaurs, although Augusta had originally planned to incorporate many textual passages from Doyle's *The Lost World* as well as images painted for that novel by Burian (it remains unclear how many there

were but I know of at least five including the incomplete London zoological meeting). However, just two monochrome images were eventually used, both of which were later reproduced in the 2012 centenary edition of the novel that I co-authored with Dana Batory, Cory Gross, Norman Snelling and David Spalding (and which also included other works by Burian). In 1962 the series returned to large-format with *A Book of Mammoths* that had 25 paintings (many of which were completed in 1961), followed by *Prehistoric Sea Monsters* in 1964 with 24 paintings (a number of which were completed in 1962). Ironically this title omitted Burian's two most famous marine reptile paintings (the colour *Tylosaurus* & *Pteranodon* and the monochrome *Tylosaurus*, *Elasmosaurus* & *Pteranodon*, both from 1941) although by this time the series had become so popular that publishers were wary of duplication in the eyes of collectors. Finally, the last title in the series *The Age of Monsters* was released in 1966 with 27 paintings dealing with mammalian and avian megafauna, as well as

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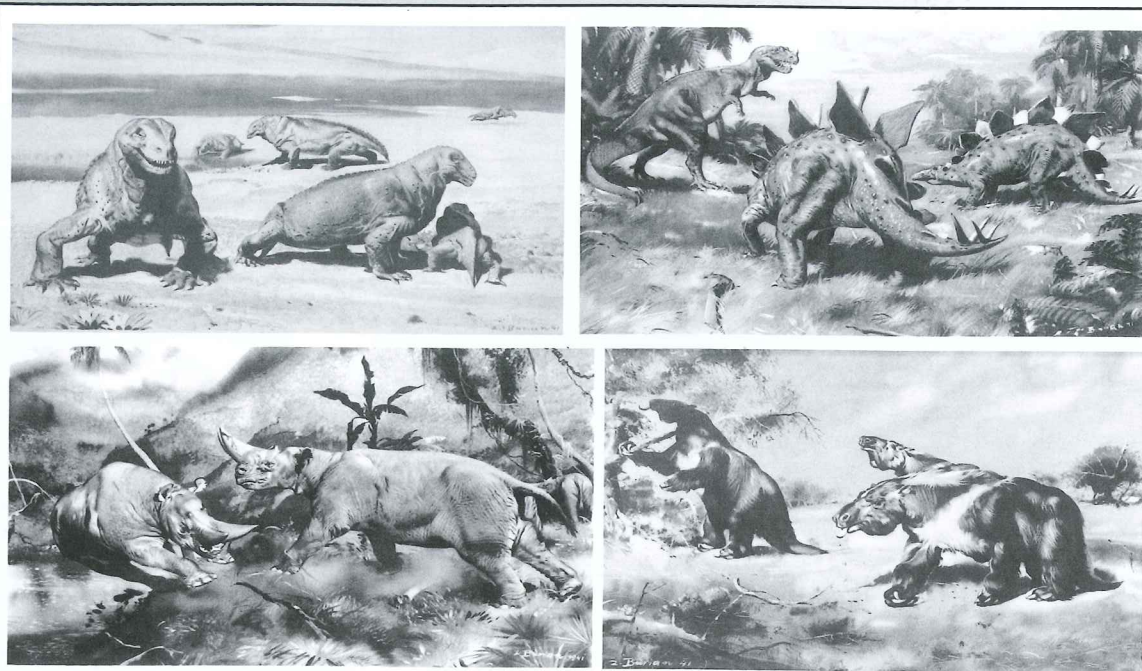
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basilosaurs. Sadly, several years after *Prehistoric Animals* was published, Burian largely abandoned his special monochrome medium for depicting palaeo-subjects in favour of colour which, at that time, was in greater demand by publishers and public alike.

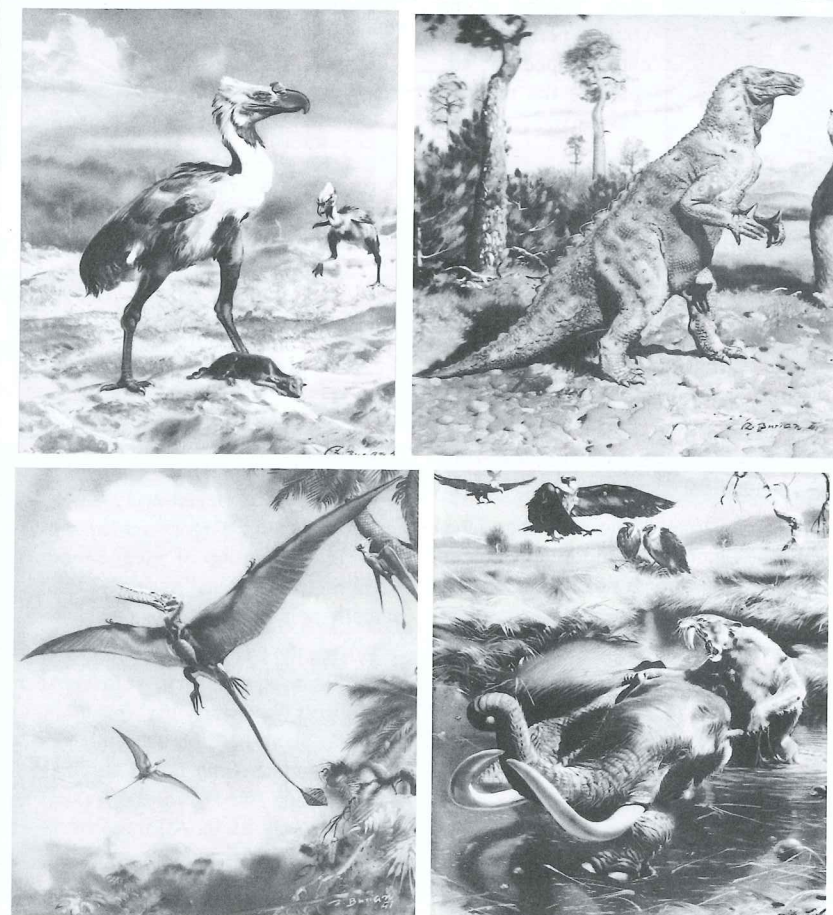
The American evolutionist Stephen J. Gould (who was an enthusiast of Charles R. Knight) described *Prehistoric Animals* as one of the three most influential visual texts on palaeontology of the 20th Century. However, Burian was not as well-known in the US as he was in Europe, Russia, China, Japan and many Commonwealth countries (where Augusta's books were not only popular with collectors but also standard titles in public libraries) and I would not hesitate to describe *Prehistoric Animals* as the most influential pictorial title of the Century. It was translated and published in the UK, France, Italy, Germany, and Japan (amongst others) and, after Augusta's death, was the basis for the equally popular *Life before Man*.

The Augustanian era is often associated with Burian's dinosaur reconstructions even though these constituted only a small portion of his palaeo-output. In *Prehistoric Animals* dinosaurs accounted for 23% of the faunal images (excluding *Archaeopteryx*) and this dropped below 10% in *Life before Man* (1972) and 12% in the 1995 edition (due to the addition of one 1950 image and eight from the post-Augustanian era, one of which – *Brachiosaurus* – was a replacement of the 1941 original). During his career Burian depicted 45 dinosaur genera, his first 'official' painting being *Tyrannosaurus* & *Trachodon* (1938) and his last being *Stegosaurus* & *Ceratosaurus* (1980) for the Vágner series (see later section). His most frequently depicted 'saurian' was *Archaeopteryx*, followed (in no particular order) by *Stegosaurus*, *Iguanodon* and *Diplodocus*.

It is somewhat ironic that Burian is probably best-known in the West for his dinosaur paintings. Unlike Charles R. Knight, Augusta and Burian did not have access to the abundant fossil material that graced the large North



Burian's palaeo-themed images from 1941 included (clockwise from top left): *Moschops*, *Ceratosaurus* and *Stegosaurus*, *Megatherium*, and *Arsinoitherium*.



Well-known palaeo-themed Burian works completed in 1941 (clockwise from top left): *Pteranodon*, *Iguanodon*, *Smilodon* and *Archidiscodon*, and *Rhamphorhynchus*.

walking about on land at a time when most other artists assumed that the limbs of such large animals were unable to support their weight unaided by water. In addition his theropods had avian-like hind-limb musculature rather than the (erroneous) lizard-like ones that were still favoured by some palaeo-artists. As a result of these factors, Burian's dinosaurs always appeared balanced and free of the basic biomechanical errors that even

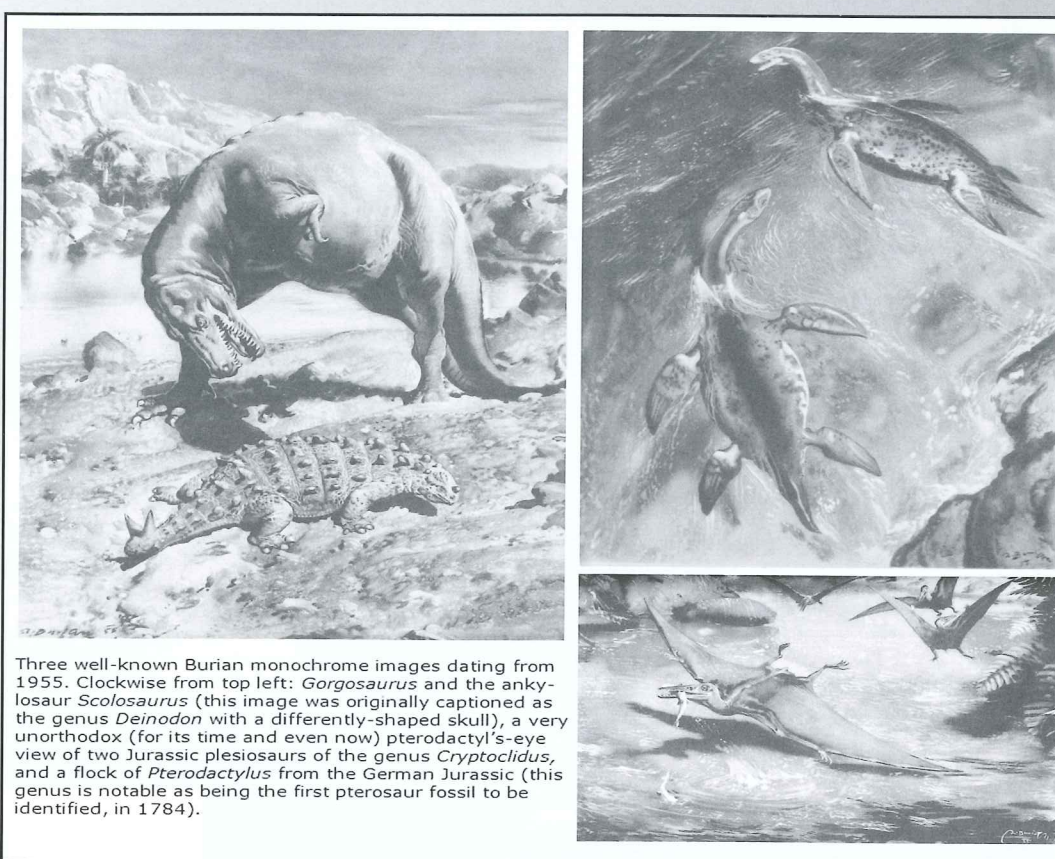
American museums as a result of the Cope vs Marsh 'bone war' feud with its accompanying flood of dinosaur remains from the western US. When Augusta had shown Burian the *Diplodocus* photo at their first meeting, it was because Czechoslovakia did not at that time possess a single dinosaur skeleton in its museum collections (conversely, it did boast a strong tradition in other fields of vertebrate palaeontology, especially amphibians, Ice Age mammals, and palaeoanthropology).

Burian was already accomplished at painting natural history subjects long before he attempted prehistoric ones, so it was only natural that he based the morphologies of larger dinosaurs upon those of today's mega land mammals such as elephants and rhinos. From the very outset he depicted large dinosaurs with parasagittal (mammalian-like) limb positions and, apart from his original *Brachiosaurus*, the main subjects of his sauropod paintings were shown

afflict some modern palaeo-art (e.g. dinosaurs with centres of gravity too far forward of the pelvis, and large torsos supported on unnaturally slender limbs). The viewer never questions the credibility of Burian's dinosaurs as viable creatures, even if some anatomical details have no doubt changed over subsequent decades. Apart from dinosaurs, there were other taxonomic groups for which Burian's primary source materials were also museum exhibit photographs or reconstructions by other palaeo-artists who often had access to the relevant fossil material. These included the Russian scientist/artist Konstantin Flerov (1904-1980; e.g. *Indricotherium*), the American ornithological artist Robert Bruce Horsfall (1869-1948; e.g. *Uintatherium*), and Gerhard Heilmann (e.g. *Hesperornis*). Walica notes that in each case, Burian bettered the original reconstruction by a wide margin (although his interpretations of *Indricotherium* remained close to Flerov's originals).

In 1962, Burian began painting a series of paleo-themed reconstructions for the *Anthropos* Pavilion (Museum) in Brno. The *Anthropos* is part of the Moravian Museum, and in the early 1960s it underwent a major upgrade so as to present its valuable palaeoanthropological and palaeontological exhibits in what was considered (for that time) to be very innovative displays. Today it houses a three-part exhibition presenting the oldest history of human settlement in all of Europe. The Moravian Museum currently holds 200 Burian oil paintings and gouaches in its collections (on palaeoanthropological and Ice Age faunal subjects), and a large number of his drawings and sketches.

In 1967, Burian and Augusta teamed up with the palaeobotanist F. Némec for one of their last collaborative projects. This was a series of 13 detailed landscape reconstructions representing various geological periods (the Devonian, Permian, Carboniferous, Triassic, the Weald and Miocene) to augment six existing paintings completed by Burian in 1952 and 1957. Two of the 1967 canvases in particular (the mid-



Three well-known Burian monochrome images dating from 1955. Clockwise from top left: *Gorgosaurus* and the ankylosaur *Scolosaurus* (this image was originally captioned as the genus *Deinodon* with a differently-shaped skull), a very unorthodox (for its time and even now) pterodactyl's-eye view of two Jurassic plesiosaurs of the genus *Cryptoclidus*, and a flock of *Pterodactylus* from the German Jurassic (this genus is notable as being the first pterosaur fossil to be identified, in 1784).



One of the most dramatic and striking palaeontological images is this Burian painting of giant marine dragons *Tylosaurus* and *Elasmosaurus* locked in battle on the moonlit inland Kansas Sea as a flock of phantom-like *Pteranodon* soar above the conflict on translucent wings (1941).

Devonian wetlands; see figure, and a luxuriant Carboniferous intermontane valley) bear testimony to the great amount of botanical information that Burian was able to include in such reconstructions.

The much celebrated Augustanian era finally came to an end the following year with Josef Augusta passing away on Feb 4th 1968. Over the preceding 30 years, his collaboration with Burian had brought to the world a series of the most iconic and memorable images of prehistoric life ever to be depicted. Burian would go on to produce many more worthy palaeo-themed images right up until his death, but his association with Josef Augusta will always remain notable as representing the Golden Age of Palaeo-art.

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