

In Command of the Field -- On Aeronautics

The *foluain gcarbad* {flying chariots} described in the *I Gceannas ar an Chatha* {manuscript – In command of the Field} and *Tíolacas Féitheach an Tiarna* {manuscript – The Lord's Winged Conveyance} literature of ancient Ireland are so fantastic in their fabrication and abilities, it might be questioned, whether such aeronautic architectures were actualities, especially those in particular which seem to savour of *driochta*{myth}. Nevertheless, reasonable evidence is extant which is significant of the construction of plausible mechanisms in ancient times by the aeronautical pioneers of the Dál nAraidi, Dál Riata and other regions. These become all the more impressive when the description of materials and construction as well as theory of operation is given. As a scholar of these ancient texts and history's I have been privileged during my research to directly peruse and translate many of the esoteric treatises on ancient Irish aeronautics. However it would be prudent at this juncture to specify a great limitation of such translations. While certain materials and compounds can be demarcated into modern elements, such as the frequent use of quicksilver-mercury boilers and the like in these ancient propulsion systems, other concepts such as *rothaí láidir*{strong wheels} may be generative terms for the engines of these craft or a rather more specific mechanisms. Therefore it is evident that such speculation may be unwise and hence propulsion systems are often addressed in what is an unavoidably obscure fashion.

The most frequently cited manuscript, composed in *Gaelige ársa* {ancient Irish} by King Domangart Réti in the 5th Century A.D., deals with techniques of warfare, and in particular with certain types of war machines that were adjudged commonplace in *anallód* {ancient times?}¹.

The work is commonly known as *I Gceannas ar an Chatha*, or "In Command of the Field" (frequently abbreviated as 'The Command'), and the whole of chapter XXI is comprised of information on the fabrication and operation of numerous kinds of aircraft and their several methods

¹ It is understood that {The Command} manuscript describes the golden age of {flying chariots} as being in the period that is contemporaneously dubbed the Late bronze age, concurrent with Ramesside period of ancient Egypt. However the chronologies that Domangart Réti provides are speculative. Following my extended comparative studies time periods beginning when the Ice sheets began to recede 10,000 BC to 7,000 BC are an altogether more plausible period for this golden age.

of propulsion. King Domangart Réti, who used the old Irish term *Tíolacas Féitheach*{winged conveyance} more often than the more familiar *foluain gcarbad*{flying chariots}, claimed his knowledge was based on other manuscripts which were ancient even in his time. Most interestingly some of the techniques of manufacture described therein bear, by turns, remarkable and uncanny likenesses to the modern aircraft and airborne contrivances that have so rapidly developed between that faithful day in kitty-hawk and the martial crucible of the Great War. Furthermore, upon examination by modern specialists these winged conveyances appear to be founded upon sound aeronautical principles even though described in an antiquity far later than their original Halcyon period. The old Irish term flying chariot only appears twice in the forthcoming passages which is a notable contradiction of the proliferation of that particular nominative which presides in other English transcripts which I have examined.

In the examination of the complete manuscript, it is evident that Domangart Réti has at his disposal the detailed description of several types of aerial mechanisms which are 'strong wheeled' (transitive verb). It is made apparent that the conveyances described below are in effect lacking the necessary power/ability {*cumhacht agus neart*} to breach the air which allows their reckoning in 'The Command' to be placed below that of a higher caste of *Diaganta Tíolacadh Féitheach*{godly winged conveyances}². Below is my select translation of the 5th century text text.

² Further research is required into these 'godly winged conveyances' which are variously described as being 'conveyances for land/region without air' or 'land/domain of the Sun'

I gCeannas ar an Chata

"In command of the Field"

Translated from the Old Irish

By P. Eugene Esmonde

"Robust and enduring must the *Tíolacadh Féitheach* {winged conveyance's} body be constructed, of buoyant material and having expanses joined with precision and less than visible seams. It might carry liegemen {passengers}, it can be constructed diminutive and shrunken, it can convey in soundlessness. If this stealth is to be maintained, there must be prodigious and soft flexibility in the strong wheels and strong wheeling {driving mechanism and locomotion}, and wheels and instruments must be in of flawlessly soft connections. In accomplishment it will have the ends and extremes of endurance, it must be enveloped and skeleton[ed] (intransitive verb) in . . . a material avoidance of heat, and stiffness, nor softness, and its sharp-pointed fist {pugilistic} must also be unbreakable of hard and soft friendship. Indeed, the strong wheels properties, recalled by chant and story are celebrated by one and all, comprise perpetuity of motion. Soft precision is the machines reason; thus, the strong wheeling must enjoy range, finish, strict form that defies growth under heat, always compliant."

As further points appear and the text becomes more obscure and translation becomes increasingly difficult. As explained in the introduction the essential features of the propulsion mechanisms are

vague or left out entirely. It is clear that many of the terms and their import were as alien to the original scribe as they are to contemporary readers.

"At a correct and opportune time the stretch and volume of fire must be unleashed, which delivers strength to the greater softness. Following restrained growth (compression), in company and song with the thunder of the growing wheels, this thunderous growth performs work like a beast in wheeling and circular perpetuity."

Elsewhere in the manuscript is a tract which refers to the 'wood of the flying charioteer' as a material of construction of one of these winged conveyances; then it follows by launching into a contracted detail of the propulsion system which seems to utilise a flammable liquid like petroleum.

"The fabrication of a conquering and war making {winged conveyance} is of considerable desire . . . with the use of charioteer's wood the construction of a great air defeating wheeling of a strong-material method. In the most important receptacle is the fluid consumed by the strong wheels, which during motion burns until complete combustion."

In addition to this a list of the manoeuvres and flight techniques available to the charioteer are described. Many of these manoeuvres are at the cutting-edge of modern aeronautics.

"in complete renown are the manners for master and control of motions: vertical climbing and drop; fore and aft in slanting; and long distances through mastery of adjustment of the strong wheels and expanses . . . Its pugilistic sound and thunderous temper can easily drown out the greatest bellow but musical song is also within its ability.

"The great {winged conveyances} might travel wherever the will of the charioteer dictates. From magnificent elevation they observed stimulating dances and movements and ceremony. The renown of their {winged conveyances} became wide and royal. By these means the good-Souled ones flew, while the lower souls walked. Those allies found success in often warlike acquisition of a {flying chariot}, by means of which men can conquer the air, and the godly might descend to men when visiting the land."

Some of these aircraft in the 'Command' appear to be winged akin to modern aircraft and with this there seems to be concurrent restrictions upon the manoeuvrability of these winged craft over those which are not so described. One section is a particular example which appears to deliver detail of mercury (quicksilver) propulsion of a such winged craft.

". . . Thus, within the quicksilver-combustion; and correct mounting below it, the iron heating wheels (rotates?). Men thusly arrange the winged, strong force circular in motion; and the stealthy charioteer, by means of soft bond of strong wheels and quicksilver, may traverse great leagues in the heavens."

In following this a description of a far greater and complex craft is provided which is propelled by no less than four mercury-engines.³

"A prodigiously speedy {flying chariot} can be fabricated, as great as the temple of {mythic location}... Into the skeleton four strong quicksilver wheels must be constructed. Upon heated stretch and growth a controlled fire from iron wheels, the strong wheels develops in thunder through the quick silver. Moreover, if the strong skeleton is in company with flawless softly closed connections it to may be filled with fluids when descent or climbing is desired."

"The secret of the strong wheels construction were known to many however the exotic materials were finite and guarded. It is for these reasons that places their providence beyond reach."

Upon the conclusion of this short treatise I would like to advance my thanks and apologies to other experts for both their help and any discrepancies they might perceive in the translation of Domangart Réti's manuscript.

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³ This is the second point in the text where the nominative {flying chariot} is used over {winged conveyance}