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# Marine Meteorology - English versus Romanian Terminology in the 18<sup>th</sup> -19<sup>th</sup> centuries

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**Abstract.** The marine meteorology, as a branch of meteorology, a science developed in the 18<sup>th</sup> and 19<sup>th</sup> century, has certain characteristics and its own terminology. Although words denoting natural phenomenon existed long before the science, a comparison between English and Romanian terminology in the 18<sup>th</sup> and 19<sup>th</sup> century is to establish the similarities and differences between words with the same meaning that entered the scientific vocabulary or were formed in the period mentioned.

## 1. Introduction

The Marine Meteorological Terminology is a part of Meteorological Terminology with a general part which is common and a part of specific vocabulary which may be shared with marine hydrology or oceanography. One definition of the Marine Meteorology is given by Xie L. in *Encyclopaedia of Atmospheric Sciences* (2015).

“Marine meteorology is a subfield of meteorology, which deals with the weather and climate as well as the associated oceanographic conditions in marine, islands, and coastal environments.” [1]

The marine meteorology deals with the reciprocal action between atmosphere and ocean. The vocabulary of this branch of meteorology should be consequently formed by words related to marine and coastal activities.

The meteorological terminology could be divided historically, in our opinion, into four distinct periods. The first period, when the words connected to marine meteorology were known and used by people who lived by the seas and oceans, extend up to the 14<sup>th</sup> century. The second period includes the era of the great geographical discoveries between approximately the 15<sup>th</sup> and 17<sup>th</sup> century. The third period is that of developing the meteorology as a science and consequently the marine meteorology in the 18<sup>th</sup> and 19<sup>th</sup> century. The fourth period can be considered as starting in the 20<sup>th</sup> century and continuing nowadays.

The period when meteorology, like many other component parts of crafts or skills, became a science, is one of the most rewarding for the linguist dealing with terminologies. A comparison will be made

between English and Romanian marine meteorological terminologies in the 18<sup>th</sup> -19<sup>th</sup> century when the process of changing the seafarers' vocabulary into a sub-discipline of atmospheric sciences took place.

## 2. The terminology in the 18<sup>th</sup> and 19<sup>th</sup> centuries

We have demonstrated in a previous article [Balagiu 2018] about the marine meteorology that up to the late 17<sup>th</sup> century the English and Romanian meteorological vocabularies were different. About 40 per cent of the Middle Ages English meteorological vocabulary has German origin, while the Romanian meteorological vocabulary is about 70 per cent of Latin and French origin.

Besides the main body of meteorological vocabulary formed up to the 18<sup>th</sup> century for the English and until the beginning of the 19<sup>th</sup> century for the Romanian one, the terminology is formed in the 18<sup>th</sup> and 19<sup>th</sup> century when scientific words entered both vocabularies. We selected 40 words found in the English texts from the 19<sup>th</sup> and 20<sup>th</sup> century, the same number of terms that were analysed in the previous article, so that the parallel between the two periods to be easier made.

1. **airflow** first known use in 1878.  
**curent de aer** (probable after the French phrase *courant d'air*).
2. **anemometer** origin 18<sup>th</sup> century from *anemos* 'wind'+ *meter*.  
**anemométru** < fr. *anemometer*.
3. **aneroid** origin mid-19<sup>th</sup> century: coined in French from Greek *a-* 'without' + *nēros* 'water'.  
**aneroíd, aneroide**, adj. (în sintagma) Barometru aneroid (și substantivat, n.) – din fr. *anéroïde*.
4. **altocumulus** Late 19<sup>th</sup> century: from modern Latin *alto-* (from Latin *altus* 'high') + *cumulus*.  
**altocumulus** subst. < fr. *altocumulus*.
5. **altostratus** late 19<sup>th</sup> century: from modern Latin *alto-* (from Latin *altus* 'high') + *stratus*.  
**altostrátus** s. m. (< fr. *altostratus*).
6. **anticyclone** (n.) 1863, coined by Francis Galton, English polymath, explorer, and meteorologist, from *anti-* + *cyclone*.  
**anticiclón, anticicloane**, s.n. – din fr. *anticyclone*.
7. **aurora** dates from the early 18<sup>th</sup> century.  
**auróră** s. f. **o ~ polară** (< fr. *aurore*, lat. *aurora*).
8. **barograph** origin mid-19<sup>th</sup> century: from Greek *baros* 'weight' + *-graph*.  
**barograph** s.n. Barometru înregistrator. [< fr. *barographe*, cf. gr. *baros* – greutate, *graphein* – a scrie].
9. **celsius** 19<sup>th</sup> century.  
**celsius** sec XIX.
10. **cirrocumulus** first known use circa 1803.  
**cirrocumulus** s.m. – din fr. *cirro-cumulus*.
11. **cirrostratus** first known use circa 1803.  
**cirrostratus** s.m. < fr. *cirro-stratus*.

11. **cirrus** (n.) In meteorology, in reference to light, fleecy clouds, attested from 1803; so called from fancied resemblance of shape.  
**círus** s.m. (Met.) [Pl. -uși. / <fr., lat. *cirrus*].
12. **col** origin mid-19<sup>th</sup> century: from French, literally ‘neck’, from Latin *collum*.  
**șa (șéi)**, s.f. var. *șea*. – Mr., megl. *șauă*, *șao*, pl. *șali*. Lat. *sella* (Pușcariu 1490; REW 7795), cf. it., prov., cat. *sella*, fr. *selle*, sp. *silla*.
13. **cumulonimbus** first known use in 1887.  
**cumulonimbus** s.m.– din fr. *cumulo-nimbus*.
14. **cumulus** Mid-17<sup>th</sup> century: from Latin, ‘heap’.  
**cumulus** s.m.– din fr., lat. *cumulus*.
15. **cyclone** mid-19<sup>th</sup> century: probably from Greek *kuklōma* ‘wheel, coil of a snake’, from *kuklos* ‘circle’. The change of spelling from -m to -n is unexplained.  
**ciclón** s.n. [Pl. -oane, (s.m.) -ni. / < fr. *cyclone*, germ. *Zyklon*, cf. gr. *kyklos* – cerc].
16. **depression** from Latin *depressio(n-)*, meteorological sense is from 1881 (in reference to barometric pressure).  
**depresiúne** s. f. **o** ~ **atmosferică** (< fr. *dépression*, lat. *depressio*).
17. **duststorm** first known use of dust storm 1879, in the meaning defined.  
**furtună de praf** subst. compus.
18. **degrees** from Old French, based on Latin *de-* ‘down’ + *gradus* ‘step or grade’.  
**grad** ~e n. < fr. *grade*, lat. *Gradus*.
19. **dew point** first known use of dew point in 1826.  
**punct de roua** (poate fi o traducere din engleza).
20. **evaporation** from Latin *evaporat-* ‘changed into vapour’, from the verb *evaporare*, from e- (variant of ex-) ‘out of’ + *vapor* ‘steam, vapour’.  
**evaporáre** s.f. acțiunea de a (se) *evapora* și rezultatul ei; *evaporație*. [< *evapora*].
21. **hygrometer** probably from French *hygromètre*, from *hygr-* + *-mètre* –meter  
**hidrométru** s. n. (< fr. *hydromètre*).
22. **instability** from French *instabilité*, from Latin *instabilitas*, from *instabilis*, from *in-* ‘not’ + *stabilis*.  
**instabilitáte, instabilități**, s.f. din fr. *instabilité*, lat. *instabilitas*, -atis.
23. **intertropical** the first known use was in 1794.  
**intertropicál, -ă** adj. între, dintre tropice. (< fr. *intertropical*).
24. **isobar** – line of equal atmospheric pressure origin mid-19<sup>th</sup> century: from Greek *isobaros* ‘of equal weight’, from *isos* ‘equal’ + *baros* ‘weight’.  
**izobár, -ă** s.f. [Var. **isobar, -ă** adj., s.f. / <fr. *isobare*, cf. gr. *isos* – egal, *baros* – greutate].

25. **isotherm** origin mid-19<sup>th</sup> century: from French *isotherme*, from Greek *isos* ‘equal’ + *thermē* ‘heat’.  
**izotérm** ~ă (~i, ~e) (despre transformările de stări) < fr. *Isotherme*.
26. **katabatic** (wind) origin late 19<sup>th</sup> century: from Greek *katabatikos*, from *katabainein* ‘go down’.  
**catabátic, -ă** adj. (despre vânturi) care posedă o component vertical descendentă. (< fr. *katabatique*).
27. **mammatus** (of, relating to, or being a cloud whose lower surface is in the form of pouches) New Latin, from Latin, of the breast  
**mamatus** (not found)
28. **lenticularis/** (lenticular cloud) origin late 19<sup>th</sup> century. Latin *lenticularis*, from *lenticula*, diminutive of *lens*, lent- ‘lentil’.  
**lenticulár, -ă** adj. în formă de lentilă; lentiform. (< fr. *lenticulaire*, lat. *lenticularis*).
29. **mirage** origin early 19<sup>th</sup> century: from French, from *se mirer* ‘be reflected’, from Latin *mirare* ‘look at’.  
**miráj** s.n. [Var. **miragiu** s.n. / < fr. *mirage*].
30. **nimbostratus** origin late 19<sup>th</sup> century: modern Latin, from *nimbus* + *stratus*.  
**nimbostratus** s. m. (< fr. *nimbo-stratus*).
31. **offshore** first known use of offshore adverb 1720, adjective 1769.  
**în larg** adv.
32. **pileus** origin mid-18<sup>th</sup> century: from Latin, literally ‘felt cap’.  
**piléus** s. n. (nori) (< fr., lat. *pileus*).
33. **psychrometer** origin early 18<sup>th</sup> century: from Greek *psukhros* ‘cold’ + *-meter*.  
**psicrométru** s.n. Instrument cu care se măsoară umiditatea aerului, bazat pe efectul de răcire al evaporării. [Var. psihrometru s.n. / < fr. *psychromètre*].
34. **roll cloud** origin late 19<sup>th</sup> century.  
**nor rulat/trabuc** (cuvântul lipsește din dicționare).
35. **stratocumulus** first known use of 1845, in the meaning defined.  
**stratocúmulus** s. m. (< fr. *strato-cumulus*).
36. **stratus** early 19<sup>th</sup> century: modern Latin, from Latin, literally ‘strewn’, past participle of *sternere*.  
**strátus** s. m. (< fr., lat. *stratus*).
37. **synoptic** Early 17<sup>th</sup> century: from Greek *sunoptikos*, from *sunopsis*.  
**sinóptic, -ă, sinoptici, -ce**, adj. Hartă sinoptică < fr. *Synoptique*, Cf. germ. *synoptisch*.
38. **thermometer** mid-17<sup>th</sup> century: from French *thermomètre* or modern Latin *thermometrum*, from *thermo-* ‘of heat’ + *-metrum* ‘measure’.  
**termométru** s.n. (din fr. *thermomètre*).

**39. torrential** first known use of torrential 1849.

**torential, -ă** adj. (Despre ploii) [Pron. -ți-al. / cf. fr. *torrentiel*, it. *torrenziale*].

**40. tsunami**/ abnormal wave origin late 19<sup>th</sup> century: from Japanese, from *tsu* 'harbour' + *nami* 'wave'.

**tsunami** s.n. [< fr., engl. tsunami < cuv. japonez].

Analysing the English words that entered the marine meteorological terminology in the 18<sup>th</sup> and 19<sup>th</sup> century and their Romanian equivalents that should have formed the scientific terminology at about the same time, the following characteristics can be expressed:

a. Twenty English words out of forty are compounds formed either from Greek and coined in French or Latin, while others were formed from separate English words. The same words in Romanian came from French words or were formed following the French structure.

b. Nine words, which are not compounds or formed with suffixes, have the origin in Latin both in English and in Romanian terminology.

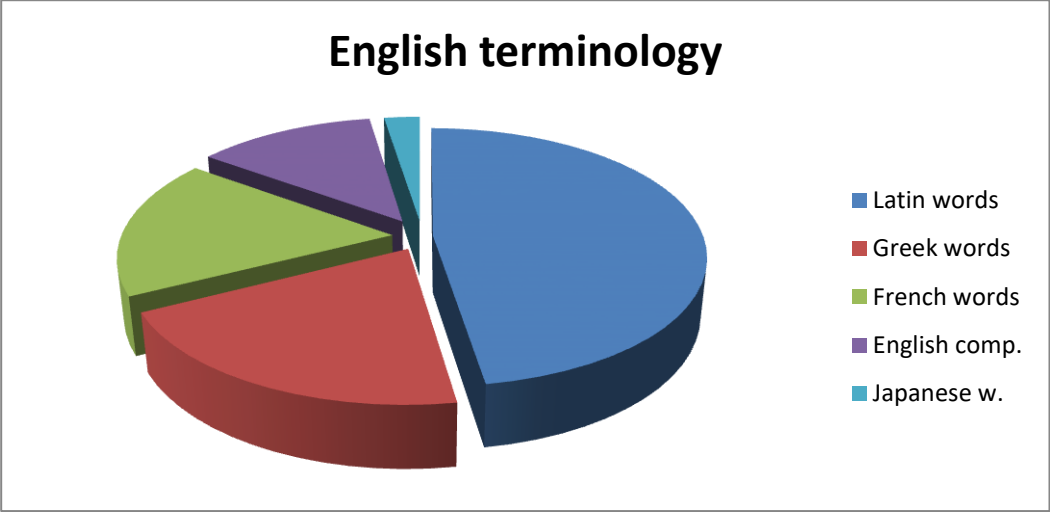
c. Four Romanian compounds could have entered the vocabulary from English or could have been formed in Romanian under the influence of the English compound.

d. There is a great number of words forming the scientific terminology in English that were formed from the words existing previously in the vocabulary, or words coming from proper nouns (the name of the scientist that discovered the phenomenon) that were combined with existing common nouns. Some of those compound nouns and phrases are: advection fog, air pressure, aneroid barometer, arcus cloud, Barometric pressure, clear weather, cloud cover, cloud patterns, cloud wall, cold front, cold occlusion, cooling effect, droplets of water vapour, dry winds, gale force wind, heat troughs, heavy cloud, heavy showers, high-pressure system, intertropical convergence zone, latent heat, line squall, low-pressure system, moist air, moisture-laden air, Northern Hemisphere, occluded front, ocean currents, polar highs, Polar maritime, pre-frontal trough, rain falls, relative humidity, ridge line, rising air, shelf cloud, saturated air, sea surface, sea-breeze, showery conditions, Sling psychrometer, solar equator, steep pressure gradient, streaks of lightning, surface roughness, surface winds, torrential rain, trade winds, tropical cyclone, Tropical maritime, tropical-revolving storms, up draught, upper atmosphere, upward funnelling effect, upward movement, warm front, warm occlusion, water vapour, weather maps, whirling psychrometer, wind arrow, wind vane.

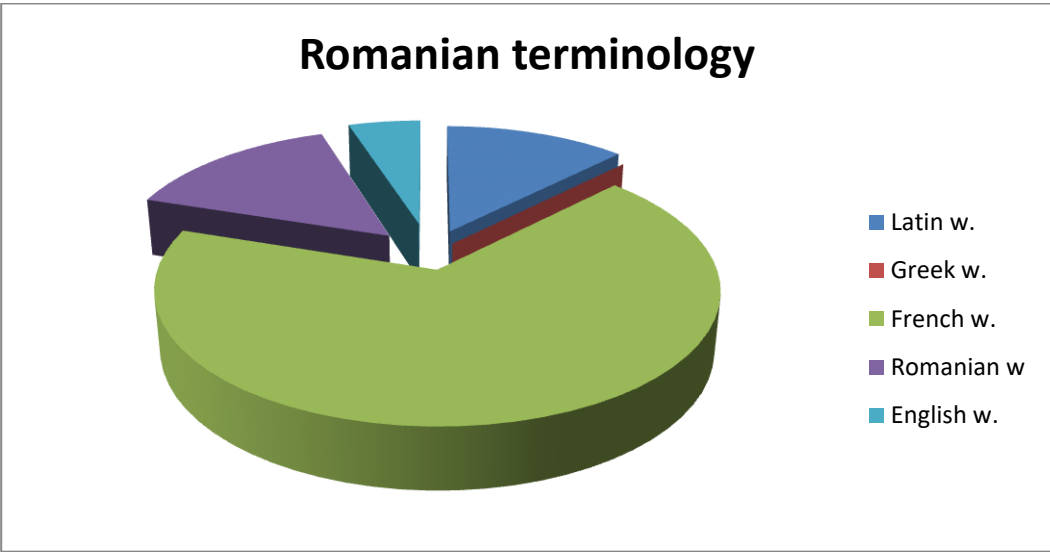
### 3. Conclusions

The graphic analysis of the 40 English words taken into discussion in this article shows that most words referring to marine meteorology come from Latin (48%), the next most important part is formed of words coming from Greek and compounded to give new meanings (20%). Also of Latin origin, but this time through French, there are about 18% of the words borrowed to express new scientific realities. Only 13% of the terminology is formed from English words by compounding them.

If we take into consideration the compounds at point d. we can draw the conclusion that about half are formed by using only English words that come from the base of the vocabulary, which was formed before the 18<sup>th</sup> and 19<sup>th</sup> centuries, and the other half is constructed from Latin, Greek and French words that are compound with English words forming the main core of the meteorological vocabulary.



The corresponding graph-form for the Romanian terminology of about the same period shows that most of the borrowings are from French (77%). The direct Latin borrowings are less well represented with only 14%, while the terminology formed inside the Romanian language from the words already existing from the previous centuries starts to be better represented. At the same time a slight English influence can be observed, due to the development of marine meteorology and the English scientific terminology.



The marine meteorological terminology in English and Romanian from the 18<sup>th</sup> and 19<sup>th</sup> century is very similar, although the origins of the words are different. A common trait is that the terminology becomes one of Latin origin, in comparison to the previous centuries when the English meteorological terminology was mainly of German origin and the Romanian meteorological terminology was of Latin and French origin.

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