

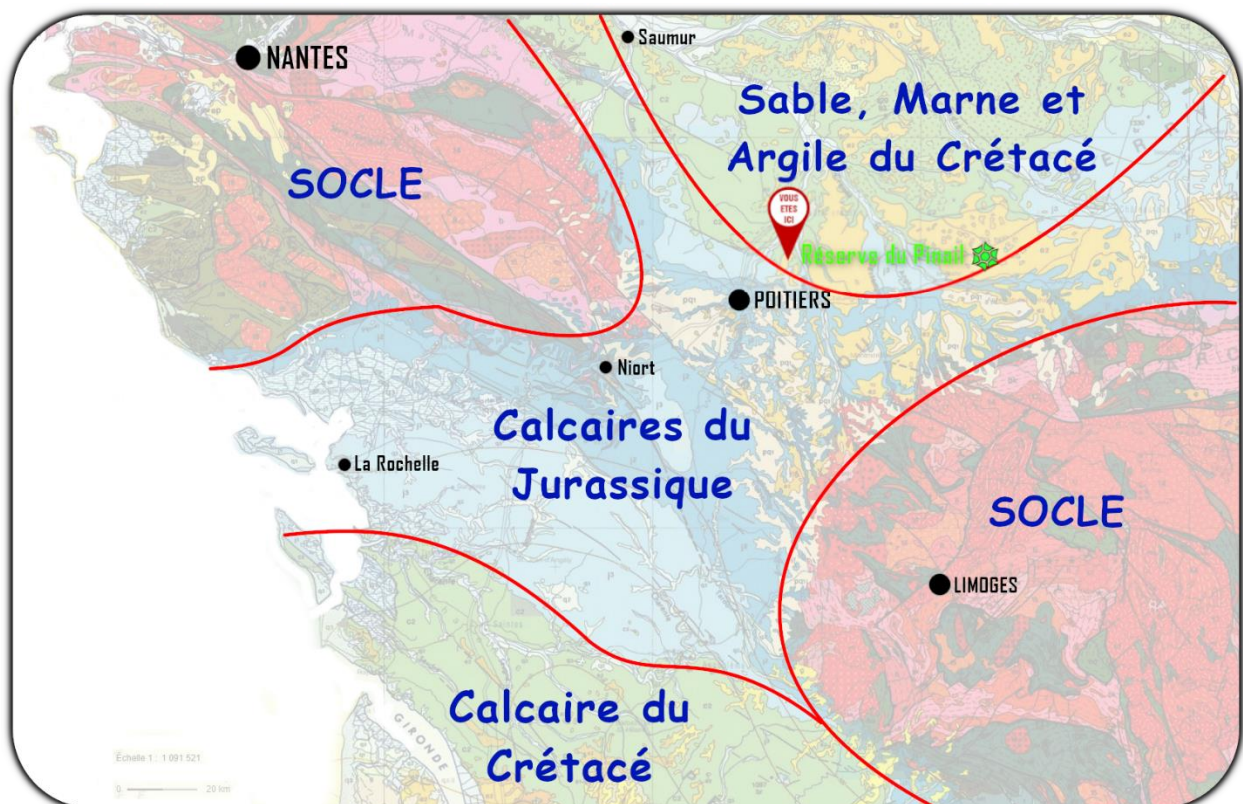


A National Nature Reserve (RNN) is a state-classified area for its remarkable biological and/or geological riches.



The RNN du Pinail, created in 1980, is located on the northern part of the Moulière state range. It is dotted with more than 5000 pits, of which about 3000 are permanent ponds.

The extraordinary lunar landscape that surrounds you was shaped by man. A mosaic of natural habitats of flora and fauna biodiversity has developed there.



Carte géologique (données BRGM)

Qu'est ce qu'une tourbière ?

C'est un milieu humide où s'accumule de la tourbe formée de végétaux morts. L'eau stagnante crée un milieu dépourvu d'oxygène limitant les processus de décomposition de la litière.

La tourbe est une véritable « roche végétale » qui peut contenir 85 % d'eau et jusqu'à 50 % de son poids sec en carbone.

Peat and peats

A veritable fossil plant rock, peat is organic soil resulting from the incomplete degradation of plant debris in a water-saturated environment. It contains at least 20% carbon (30% for clay-rich peat) and can accumulate several metres thick, at an average rate of 0.2 to 1 mm per year. Since most peatlands formed after the retreat of the last glaciation (the glaciation of the Urm, about 12,000 years ago), the peat deposits generally observed are between 50 cm and 5 to 10 m thick. The thickness of the peat deposit allows to separate the peat boges stricto sensu, whose peat thickness is at least 40 cm. , para-peat environments that have a lower peat thickness.

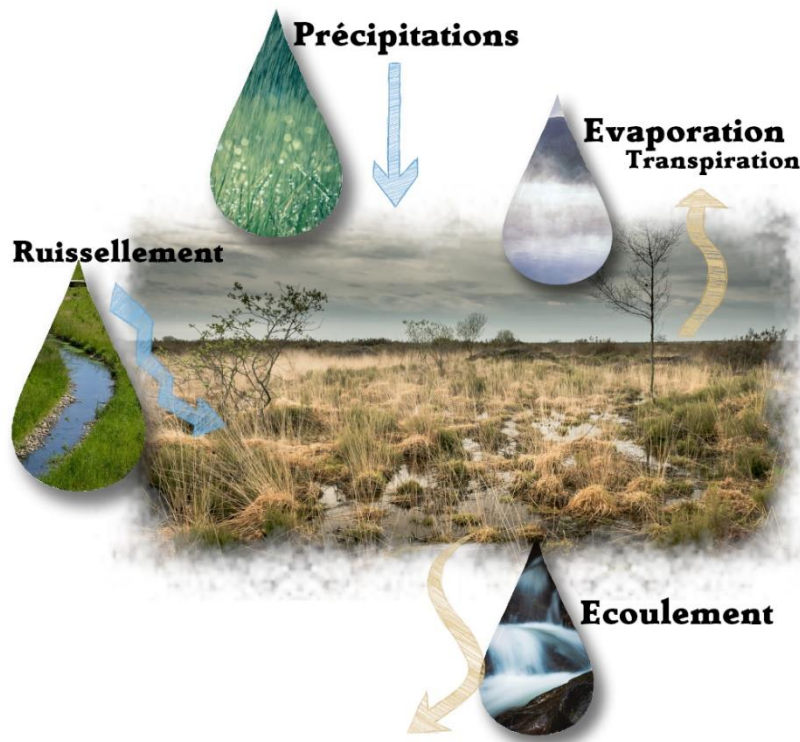
Peat-ifying plants, mainly bryophytes (including sphagnum) and various herbaceous plants, are called peatogens or turfigens. A peat bog is active as long as the processes of peat development and accumulation continue from these plants (turbification process or turfigenese). If these processes stop, the bog becomes inactive... but is sometimes likely to regenerate.



Les sphaignes sont un végétal en apparence anodin mais jouant un rôle essentiel dans l'écosystème 'tourbière'. © F.MULLER

How do peatlands form?

It takes a lot of water for a bog, more accurately, a positive water balance. That is to say, all water supplies (runoff, rain, snow, groundwater, fog...) exceed the departures (flows, evaporation, perspiration of plants...).

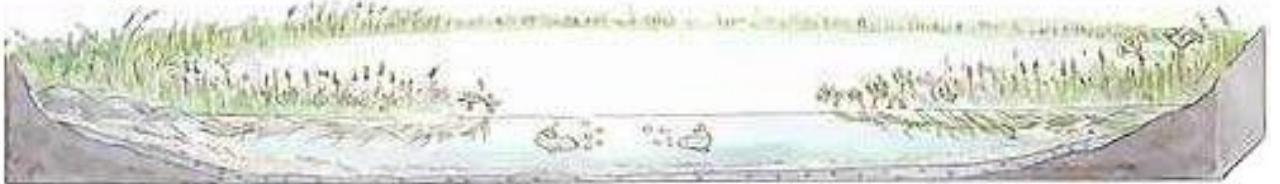


Water can be slightly running, as in slope bogs; in this case the balance of water inputs and departures is very subtle and therefore fragile.

Depuis un plan d'eau libre,



des plantes pionnières forment un radeau,



la matière organique s'accumule et la pièce d'eau originelle est complètement envahie



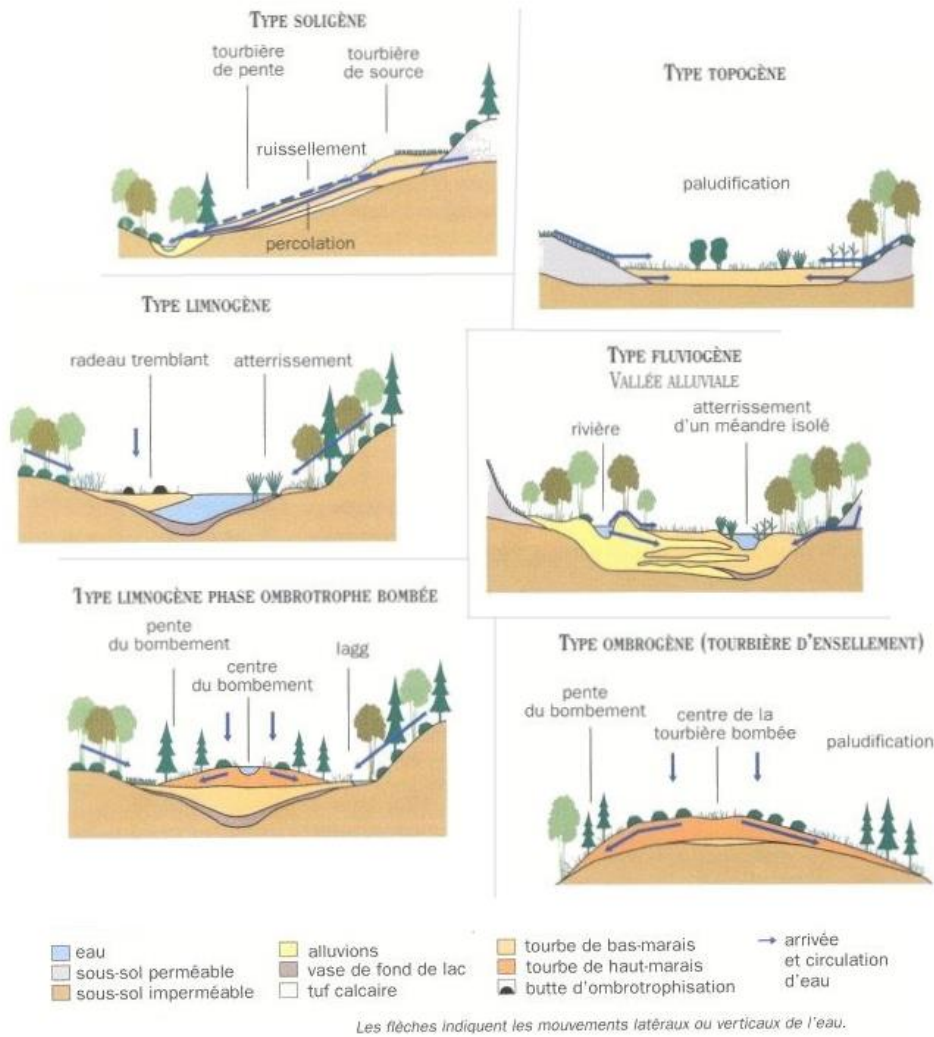
jusqu'à ce que la tourbière se bombe sous la croissance des sphaignes.



Au fil du développement de ce milieu, la biocénose se modifie pour s'adapter aux conditions nouvelles survenues à chaque stade.

Different types of peat bog

When the conditions for a positive water balance are met, combined with the production of excess organic matter, the turbification processes can begin and give rise to different types of peatlands depending on the conditions of their formation.



Thus, topogen peatlands result from the accumulation of water, from runoff or an outcropping slick, in a topographic depression.

Liminogenic peatlands are the result of the gradual landing of a piece of water from floating plant rafts.

Soligenic peatlands are created through a slow and continuous flow along a low slope (sources, seeps).

River peatlands (or telmatogens) are caused by periodic flooding of a valley by a stream or alluvial water table.

Finally, umbrian peatlands are born when heavy rainfall is the only water source responsible for turbification.

QUESTIONS

Question 1

What kind of rock is "under your feet" ?

Question 2

What is the main water supply from this reserve? What for?

Use the terms of the illustration of the paragraph "how do peatlands form?"

Question 3

Why is water so present in these places (soil type)?

Question 4

What type of peat bog forms in reserve of Pinail?

Question 5

In the Pinail reserve, what are the specific plants of the bog? Name two different ones.

To validate your visit, send me your answers by the message center or by e-mail *(see top of page)*.



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