



THE GREEN TIDES OF BRITTANY

The algal pollution of the River Wye has been in the news lately — but as yet it is not on the scale of the lethal algal deposits that wash up on the beaches of Brittany every year. In an article drawn from her report, *Algues Vertes*, published in *bande dessinée* format, INÈS LÉRAUD tells the story of a decades-long cover-up by Brittany's agro-industrial establishment. Illustrations by PIERRE VAN HOVE.

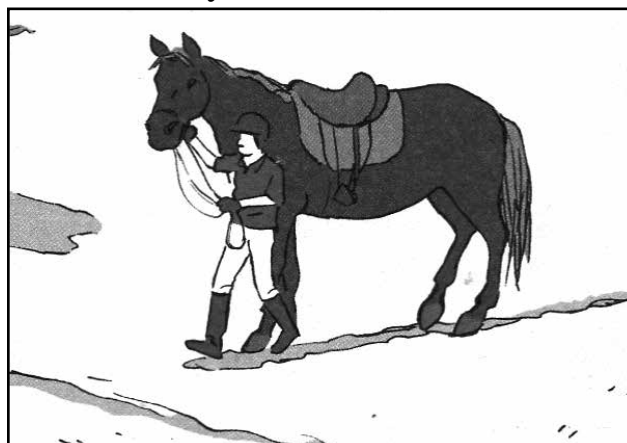
In July 2009 Vincent Petit, a vet, was riding his horse along a sandy beach at Saint Michel-en-Grève in the département of Côtes d'Armor, Brittany. But suddenly they stepped into something that wasn't sand. Horse and rider started to sink into a quagmire of foul-smelling algal sludge. The gaseous emission was so strong that both passed out.

When Vincent awoke he found himself in the hospital in the town of Lannion. His horse, he was told, was dead, and he was lucky to be alive. In the opinion of the doctor, he and his steed had been asphyxiated by the poisonous gas hydrogen sulphide (H_2S —the one that smells of rotten egg)—emanating from the “green tide” of algae, that is deposited every summer on certain beaches in Brittany in layers up to 1.5 metres thick.

But the doctor, Pierre Philippe, had more to tell. In 1989 when he was a junior doctor, a jogger had been found dead on the same beach. When the hospital came to examine his body, it stank—of rotten eggs. Philippe sent the body to a laboratory for an autopsy, but despite repeated requests could never obtain a result.

Ten years later, a tractor driver employed to remove some of the algal deposit was found unconscious at the wheel of his machine. He remained in a coma for four days and was in hospital for four months. Philippe wrote to the Health Authorities to alert them to the potential danger to health of the algal deposits, but received a brush-off.

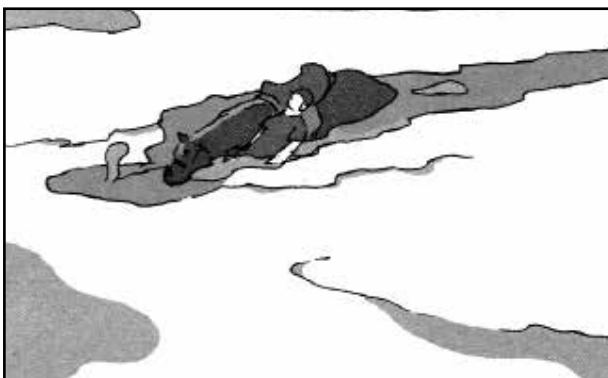
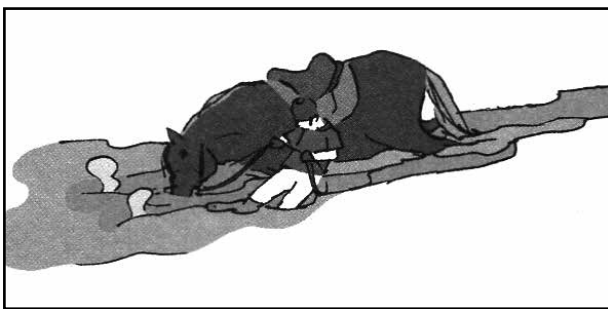
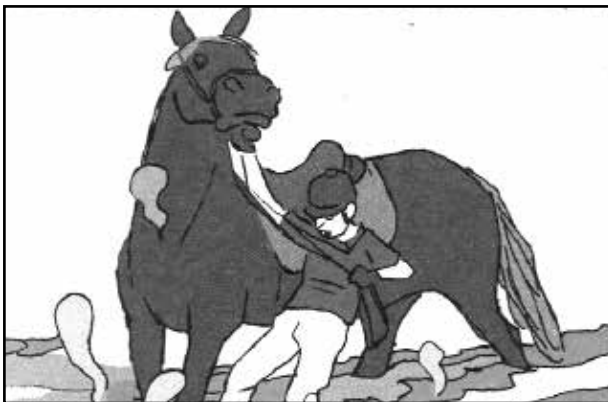
Then in 2008, Aurore Blairon was walking her two dogs along the beach, when they disappeared. She found them both dead. Since she worked as a veterinary assistant she was able to get her boss, Marie-Catherine Kerneis to conduct a post mortem. Her conclusion was that they had been asphyxiated by the algal gas. It was highly unlikely that two dogs would die simultaneously of something like heart failure. Kerneis went public and the story was picked up by local papers and national TV—yet the Prefecture, the health department and the veterinary services for the Côtes d'Armor all refused to recognize any connection



with the algae. Aurore Blairon was to blame for walking her dogs along a beach where animals were prohibited.

In the light of all these precedents, Petit asked for an autopsy to be carried out on his horse, and was alarmed to find that it had been taken to the knackers on the orders of the Prefecture, and without his permission. Happily he was able to recuperate the carcass, and an autopsy was performed at his expense, which revealed that the horse had indeed died of hydrogen sulphide poisoning.

The press took up the story and on 20 August, in the middle of their holidays, the Prime Minister François Fillon, and



three other ministers gathered on the beach at Saint Michel-en-Grève. Chantal Jouanno, Secretary of State for Ecology announced, “I have commissioned an analysis of the decomposing algae and the results are clear. On the accident site, the levels of hydrogen sulphide are double the fatal dose. What strikes me in this saga is the number of years that heads have been buried in the sand.”

The code of silence, it seemed, was finally broken. Yet a four year legal battle to establish responsibility for the horse’s death terminated in a 2014 Court of Appeal ruling that Petit was two-thirds responsible for the accident through negligence, and that he had lost consciousness, not as a result of the algae, but through an “emotional shock”.

The Death of Thierry Morfoisse

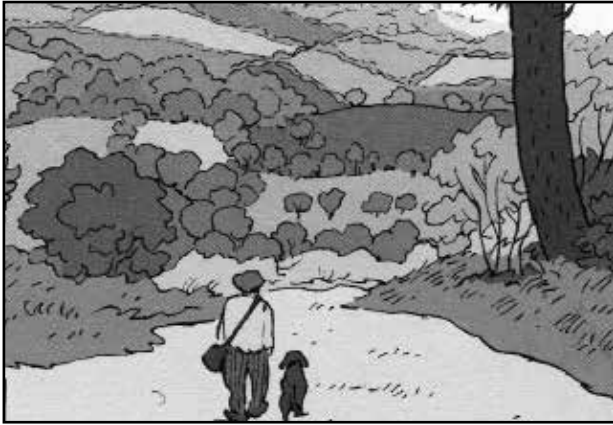
Meanwhile, just a few days before the ministerial beach gathering, another more serious incident had taken place and was again subject to a cover up. Thierry Morfoisse, a local lorry driver, was overcome by convulsions at the wheel of his truck, stopped it by the side of the road, got out of his cab and died. He had made three journeys carrying algae away from the beach and was on his way to collect a fourth.

Morfoisse worked for Nicol Environmental, a subsidiary of the massive French conglomerate Bouygues, which has interests in real estate, construction and telecoms, as well as owning ten television channels, including TF1, France’s most popular, and its Breton subsidiary TV Breizh. On the day of his death he had agreed to take over the job of transporting the algae from another worker who was feeling ill. He was equipped with neither a mask nor a gas detector, and since it was July and his cab was not air conditioned, he kept the window open.

The matter was referred to Gérard Zaug, Public Prosecutor of Côtes d’Armor, who sent off a blood sample for analysis. The results came back, that there was a potentially fatal concentration of H_2S in Morfoisse’s blood—but the possibility that the blood sample had not been properly frozen, allowing H_2S to develop spontaneously, could not be excluded. It was subsequently discovered that, funnily enough, the sample had indeed not been kept at the required temperature. After exhuming the body for a post mortem, even though two months after death it would be impossible to detect any evidence of intoxication, Zaug announced that the results showed that Morfoisse had died of a heart attack, no doubt due to his smoking habits and poor diet.

In the face of this blatant whitewash, a pressure group called Stop The Green Tides formed a committee to support the Morfoisse family in a bid to challenge the decision. It transpired that Zaug had omitted from his report of the autopsy a key sentence that confirmed that it could not be ruled out that the heart attack had been triggered by H_2S poisoning.

Meanwhile evidence emerged that other workers collecting algae had fallen ill. And over a period of ten days in summer 2011, 36 wild boar, five coypu and a badger were found dead in the green slime on a beach at Morieux.



In April 2010, the Morfoisse committee, with the support of toxicologists from the National Centre for Scientific Research, filed a complaint of involuntary homicide against persons unknown in the departmental courts. Six years, and six judges later the court ruled that Morfoisse had died of natural causes. In the face of this travesty of justice, the committee in 2017 applied, through a tribunal of the social services department, to have his death recognized as a work accident.

The Legacy of *Remembrement*

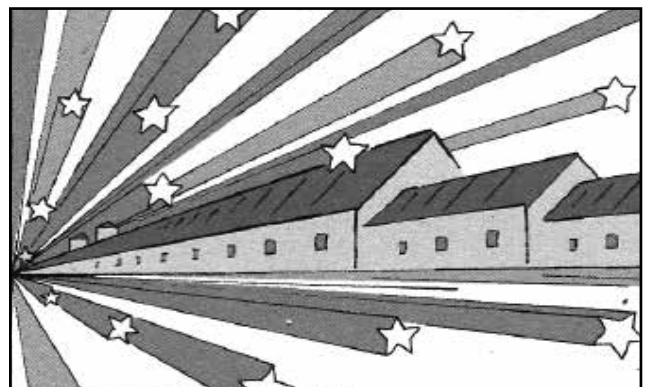
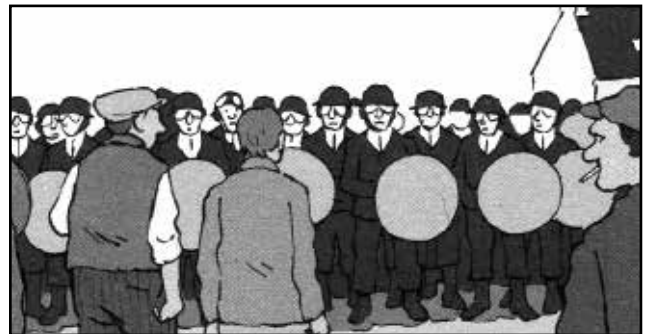
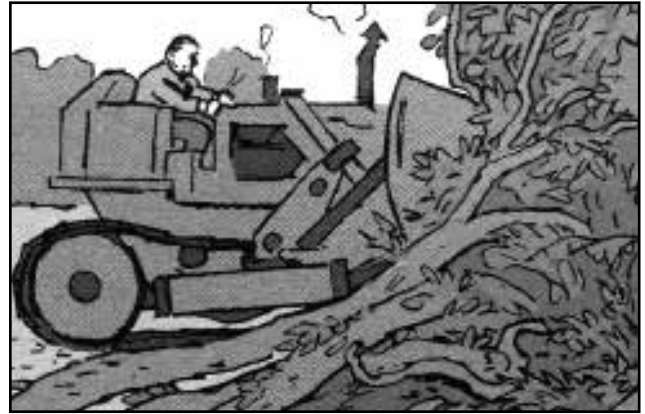
As a result of the publicity generated by the death of the horse, the French government in 2010 drew up a Green Algae Plan, with 134 million euros of funding. The plan's immediate objective was to reduce by 30 percent over five years the amount of nitrates that were leaching into the rivers and seas, which most scientists agreed were the primary cause of the algae. The long term objective was to reduce nitrate levels to below 10mg/litre by 2027.

Yet by 2013 the scientific committee associated with the plan, the Conseil Scientifique de l'Environnement de Bretagne (CSEB) reported that the plan simply wasn't working.

To understand why, it will help to consider the changes that had taken place in rural Brittany over the previous half century. At the end of the second world war Brittany was a region of independent peasants, poor, and largely untouched by industrialisation. But that was to change as money and resources were injected into the economy through the Marshall Plan. "A close and fruitful collaboration with the USA," was what Jean Monnet, the architect of France's post-war redevelopment advocated. France's agriculture was viewed as "archaic—a brake on commercial and industrial development." Minister of Agriculture Edgar Pisani urged farmers to "produce what the global market demands" even "if your milk has to be red, or your potatoes square."

From the 1960s onwards the French government pursued a policy of "remembrement" which involved getting rid of small fields, by destroying hedges, and realigning their ownership so as to create larger consolidated holdings capable of accommodating large machinery. The policy was pursued in Brittany with particular vigour, and met with fierce resistance from many farmers.

Remembrement was, in effect, a form of enclosure designed to eliminate the lesser peasantry and build up an urban



proletariat. Philippe de Calan, chief personnel officer at the Citroën factory at Rennes, interviewed on film in 2001, explained how it worked:

“To help with the establishment of the factory, the Prefect opened the doors of INRA (the National Agricultural Research Institute), which provided me with very helpful information for our recruiting policy: the size of holdings, the quality of the soil, the age of the farmers . . . We could see that to obtain the labour force necessary, farm holdings needed to increase in size to at least 20 hectares (50 acres). The Prefect completely grasped the problem. He accelerated the process by only providing aid to farmers who attained that threshold. It was the others that we were able to recruit. Ha ha ha!”

In the 1960s and 1970s, long sheds housing intensive livestock units began to appear, with pigs in particular reared indoors on wooden slats, and fed with soya and maize arriving from America through the port at Brest. Throughout the 1980s and 1990s these factory farms grew in size. Marc Le Fur, député for the Côte d’Armor, became so well known for promoting the industry that he earned the nickname “the Hon. Member for Pigs.”

Five Year Plans

The first green tide was observed on the Breton coast in 1971. By 1977 the Scientific and Technical Institute of Sea Fisheries had produced a report attributing this appearance to rising levels of nitrogen and phosphate leaching from intensive agriculture. Fishing organisations warned that trout and salmon were disappearing from rivers. In 1985 the marine research institute INFEMER gave a presentation to the Prefect and members of the Regional Council showing how the rising levels of nitrogen were responsible for the tides. But to no avail. Members were above all worried that focussing on the problem was bad for tourism.

In the 1990s the Breton agro-industrial complex began to mobilise to counter the evidence presented by scientists and campaigners—“the Khmer vertes, disciples of Machiavelli, surfing on waves of angst” as the president of the Breton Meat Producer’s Union styled them. A lobby group entitled Institut Scientifique et Technique de L’Environnement was founded with support from two locally based multinationals: Lactalis (the world’s largest dairy producers) and the Doux group (Europe’s largest poultry suppliers). It enlisted climate sceptic Christian Buson, of the consultancy GES, to give presentations to Breton farmers at union meetings. He

claimed that nitrates are not responsible for the algae, that they are good for people’s health and that the green tides could be caused by a decline in the wrinkle population owing to oil spills.

Thus it was that by 2010 when the Green Algae Plan was initiated, the Breton establishment, spearheaded by agribusiness, the mainstream farmers union (the FNSEA), and (mostly socialist) politicians, had formed a front to ensure that nothing would prejudice the prosperity of the intensive farming and tourist industries. Instead of eliminating the pollution at source, by instituting more sustainable farming methods, the



The image above is part of a four-page panorama depicting the Breton agro-industrial establishment. This edifice is built up of corporate subscribers to the Produced in Brittany lobby group — meat and dairy giants, supermarkets, banks, and Christian Buson’s consultancy GES. Produced in Brittany has its headquarters at the Institute of Locarne, a geo-strategic think-tank whose aim is to turn Brittany into an “Asiatic tiger economy”. The little fellow clambering up the edifice, in an effort to make friends with everyone, is Jean-Yves Le Drian who from 2015-17 was the socialist President of the Breton Regional Council. He later quit the socialists and became a minister in Macron’s government. Meanwhile the Breton regional government has become a shareholder in a new merger between two of the largest agribusinesses, Triskalia and D’Aucy.

industry called for an unaffordable billion-euro investment in plants to treat the effluent.

In 2013, Pierre Aurousseaux, the CSEB's president complained that scientists and ecological associations on the panel were outnumbered by industry representatives who were determined to block any progress, stating:

"A significant reduction in livestock numbers and artificial fertiliser is never considered, and without that we will achieve nothing. The plan's objective of reducing nitrate levels in rivers to 10 mg /litre by 2027 is consistently contested by the FNSEA."

When the five year plan came to an end in 2016, having achieved very little, the CSEB found its funding withdrawn. It was replaced in the second five year plan by a different scientific body, the CRESEB with a more accommodating approach. Its spokesman was reported as saying:

"To get rid of the green tides we have to change agriculture from top to bottom. But that's not possible, farmers aren't ready for that. I'm against brutal changes. But I'm convinced that we can change mentalities little by little."

They have some way to go with the mentalities of certain farmers who in the meantime had been mounting a vigilante campaign against André Ollivro, the head of the Stop Green Tides pressure group. His van was sabotaged; piles of manure, large hay bales and a mutilated dead fox were at different times dumped outside his house. In 2012 dozens of members of the FNSEA demonstrated outside Ollivro's seaside cabin, claiming (falsely) that he had erected it without planning permission. One of the demonstrators was beef farmer Olivier Allain, president of the Chamber of Agriculture for Côtes d'Armor. In 2015 Allain became agricultural adviser to Emmanuel Macron during his presidential campaign.



Groundhog Day

Then on 8 September 2016, it started all over again. The body of a 50 year old man, out for a jog, was found face down in a mass of algae at the estuary of the Gouessant river. His corpse was retrieved; his wife arrived and identified him. The doctor advised her that an autopsy should be carried out; but the mayor of Hillion, who also happened to be president of the local tourist office, advised her against it, because it would complicate the funeral. (This account, given to the author by witnesses, is contested by the mayor).

Two days later green activists arrived at the site with a hydrogen sulphide meter and registered a level sufficient to induce a coma. A few days later André Olivier held a press conference there. He wore a gas mask, but the journalists didn't and one of them collapsed from the fumes.

Finally on 22 September, the state prosecutor ordered the body to be exhumed for an autopsy. Two months later, the results were released publicly at 8.30 pm on a Friday evening. They read as follows:

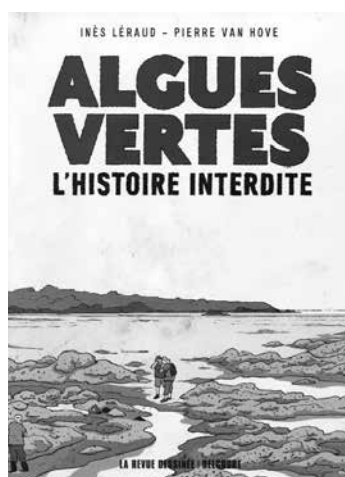
"The state of the lungs is compatible with a condition that could arise as a result of the toxic effect of H₂S. Analysis of the sludge reveals emanations of gas at 1000 ppm [a level that could cause death within minutes]. The toxicity of the sludge appears to constitute a risk to public health.

However, without the possibility of a reliable toxicological analysis [because of the delay] the cause of death cannot be clearly determined."

The green tides keep on coming, though now they are mopped up more promptly by lorry drivers who are equipped with gas masks. Every year people fishing on the shores of Brittany disappear, presumed drowned. But are they? If Pierre Philippe had not been the emergency doctor at Lannion hospital for so many years we might never have found out that green tides can kill.

This article has been drawn from the book *Algues Vertes: L'Histoire Interdite* by Inès Léraud; illustrations by Pierre van Hove, with added colour (mostly green) by Mathilda. Verbatim quotations made by characters depicted in the narrative are referenced, and there is a 23 page appendix reproducing relevant documents.

The publication of the book provoked a panic reaction amongst some elements of the Breton establishment. Shortly after publication in 2019, Christian Buson, the climate-sceptic director of GES consultancy, issued a writ upon Léraud for defamation of character. Buson withdrew his claim only a few days before it was due to be heard in court on 7 January, by which time Léraud and her lawyer had prepared a defence.



Other forces appear to want to silence Léraud. An invitation to a Breton literary salon was withdrawn after a local politician intervened. An arrangement for the book to be published in the Breton language was cancelled because the publishing house stated that it feared that it might lose its funding from the Breton Regional Council.

On 8 May 2020 an open letter in support of Inès Léraud was published in the daily newspaper, *Libération*, and signed by over 150 journalists, academics and others.

Algues Vertes can be ordered in the UK from <https://www.europeanbookshop.com>