

# Switzerland's Toxic Prosperity

By DAN FAGIN APRIL 25, 2014

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On a warm midsummer night, a few months after my book about industrial pollution in the New Jersey town of Toms River was published, I watched a fireworks show over the Rhine River celebrating Swiss National Day. I was in Basel, the city where the chemical industry first took root more than 150 years ago.

From my vantage point on the Kleinbasel (Lesser Basel) side of the river near the fabled Middle Bridge, I could see the barges from which fusillades of rocketry were emerging with digitally choreographed precision. After the show, I strolled along the embankment and took in the nightscape as tens of thousands of Swiss reveled in the pleasures of prosperity: eating grilled bratwurst, drinking foamy cups of Feldschlösschen drawn from ice-cold kegs, and dancing to techno and American pop.

The next day was the official holiday, so the streets were quieter when I returned to survey the same scene in daylight. The Rhine was still busy, now dotted with small boats and swimmers clutching colorful float bags as they drifted north in the steady current, toward France and Germany.

As I stood on the old stone bridge and watched the laughing swimmers pass underneath, something caught my attention on the concrete embankment. Instead of yet another faultlessly smooth Swiss surface, there was an unexpectedly rocky patch of concrete near the foot of the bridge. It looked as if a tributary to the river had long ago been filled in with boulders and then sealed a bit sloppily. Though I cannot be certain (it's not the kind of thing that shows up in guidebooks), I believe those rocks mark the spot that was once the terminus of the Riehenteich, a canal that was arguably the world's first dumpsite for man-made chemical waste.

Starting in 1859, the aniline dye entrepreneurs of Basel — the men whose tiny companies would morph into the global giants Ciba and Geigy and then into

successor firms like Novartis and Syngenta — built their first factories along the Riehenteich so they could empty thousands of barrels of waste into the canal and send it into the mighty Rhine. Out of sight, and out of mind — more or less the same practice the companies would later bring to Toms River, and that other firms are now utilizing in inland China.

I had come to Basel to learn about the chemical industry's past, so I decided to trace the route of the Riehenteich — at least, as best I could, given that most of the canal had been filled in and effectively obliterated for about a century. But I had a helpful old map in hand, and place names provided some clues.

About 500 feet east of the Rhine, on the street helpfully called Teichgässlein (it translates to Pond Alleyway), was the location of the oldest of the aniline factories, the one that the Ciba founder, Alexander Clavel, opened in 1859. As far as I can tell, the building is now a pharmacy that carries six kinds of antacid. Johann Müller-Pack's first aniline factory, which also opened in 1859, was a few blocks farther east, probably on what is now a starkly modernist plaza next to the city's huge convention center.

Nearby, perhaps on the spot where a fountain now sprays crystal water beside the shimmering glass walls of Basel's tallest building, was the first poisoned well of the chemical age. In 1864, dye-laced water from that well sickened a gardener and a maid unlucky enough to be employed at a home next to Müller-Pack's factory, which he rented from the Geigy family.

The ensuing scandal over the water contamination eventually chased Müller-Pack back to Paris, but the Geigys kept the factory going for years afterward. They did not shut down Müller-Pack's second factory, either. Today, that property, several hundred feet east of the convention center plaza, is the heart of Syngenta's world headquarters, a cluster of concrete-and-glass buildings where 1,200 people work. I wondered how many of them knew that the Riehenteich once flowed beneath their feet, carrying away the unwanted consequences of their prosperity into someone else's backyard.

Alexander Clavel's little dye company was already an international giant by the time Ciba built a sprawling factory at the edge of the New Jersey pinelands in 1952. By then, there was already abundant evidence of pollution-induced disease and blight in Basel and in Cincinnati, an intermittent stop on the road to Toms River. The new factory was surrounded by almost two square miles of forested

buffer, but it wasn't enough to contain the torrent of chemical waste that would emerge from the company's discharge pipes and smokestacks over the next 45 years.

The consequences for many Toms River families and factory workers were horrific. State and federal health investigators eventually concluded that an unexpectedly large number of local children had gotten sick with cancer, and that exposure to tainted water and air had likely raised their risk of getting sick.

By the time there was a full reckoning — the families of 69 children with cancer won a multimillion-dollar legal settlement — the plant had been shuttered and Ciba's chemical business had moved on, first to the American South, and then to China. The Toms River it left behind is now a cleaner, safer place, but the citizens who sacrificed so much to clean it up now worry that the cycle is repeating itself in cities and towns on the other side of the world.

Similarly, in Basel, the last of the big local chemical plants shut down years ago, pushed out after decades of complaints about air and water pollution. The final blow was a horrendous 1986 fire and spill at a Sandoz plant that turned the Rhine a vivid shade of red and blanketed the city in a foul odor described by residents as a mixture of rotten eggs and burning rubber. Today, the only signs of Basel's manufacturing past are inside local museums, which display dusky glass bottles of fuchsin dyes and yellowed photographs of low-slung factories, their smokestacks spewing white smoke across Kleinbasel and their outfall pipes disgorging into the Riehenteich.

Basel's postindustrial prosperity is built on products now manufactured far away in much poorer countries. On Freie Strasse, in the building where the first Geigy-owned trading firm opened in 1758, a chic boutique now offers "Fashion Salads" and Campari cocktails, and sells stacks upon stacks of designer-label jeans dyed and sewn in Morocco, Turkey and, inevitably, China. Two blocks down from the boutique, the booths in the open-air Marktplatz offer organic tomatoes, plums, melons and peppers that are as pricey as they are enticing. The vendors do a brisk business; there are plenty of people in the city who can afford to shun foods sprayed with pesticides developed by Swiss chemists and manufactured thousands of miles away in Asia.

It is a most convenient arrangement, and one reason life in Basel flows as placidly as the Rhine, its smooth course undisturbed by the faint, residual ripples of long-buried history.

*Dan Fagin is a professor of science journalism at New York University. His book "Toms River: A Story of Science and Salvation" won the 2014 Pulitzer Prize in general nonfiction.*

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