Troubles at Fox News were compounded yet again on Tuesday, with the emergence of new allegations of racial discrimination at the company coming less than a week after the ouster of the network’s star Bill O’Reilly.

Eleven current and former Fox News employees filed a class-action lawsuit in New York against the network, accusing it of “abhorrent, intolerable, unlawful and hostile racial discrimination.”

The lawsuit, filed in State Supreme Court in the Bronx, expands a complaint filed at the end of March by Tichaona Brown and Tabrese Wright, two black women who worked in the Fox News payroll department. In particular, the suit contends that Judith Slater, the company’s longtime comptroller, engaged in racist behavior and made racist remarks and that senior executives ignored her actions. A third Fox News employee, Monica Douglas, joined the lawsuit earlier this month. Fox News fired Ms. Slater in February.

“When it comes to racial discrimination, 21st Century Fox has been operating as if it should be called 18th Century Fox,” the plaintiffs’ lawyers, Douglas H. Wigdor and Jeanne M. Christensen, said in a statement, referring to Fox News’s parent company. “We sincerely hope the filing of this race class action wakes 21st Century Fox from its slumbers and inspires the company to take a conciliatory and appropriate approach to remedy its wrongs.”

Another former Fox News employee, Adasa Blanco, filed a separate racial discrimination lawsuit on Tuesday against Fox News, Ms. Slater and Dianne Brandi, the top lawyer at Fox News, in federal court in the Southern District of New York.

The lawsuits contend that Fox News employees repeatedly complained about racial discrimination to current network executives but that no action was taken and that the inappropriate behavior continued.

In a statement, Catherine M. Foti, a lawyer for Ms. Slater, called the lawsuits “meritless and frivolous.”

“All claims of racial discrimination against Ms. Slater are completely false,” she said.

A Fox News spokeswoman said the network and Ms. Brandi “vehemently” denied the allegations, calling them “copycat claims” from the original lawsuit.

In the class-action lawsuit — which names Ms. Slater, Ms. Brandi, Fox News and 21st Century Fox as defendants — the 11 current and former employees said that Ms. Brandi and Denise Collins, a human resources executive at Fox News, were aware of complaints about Ms. Slater’s racist behavior but told black employees that “nothing could be done because Slater knew too much about senior executives,” including Roger E. Ailes, the company’s former chief executive; Mark Kranz, the chief financial officer; and Mr. O’Reilly.

The lawsuit filed by Ms. Blanco contends that she informed Ms. Brandi about Ms. Slater’s conduct as early as September 2008.

Among the plaintiffs is Kelly Wright, a current Fox News anchor and former co-host of “Fox & Friends Weekend.” He said Mr. O’Reilly refused to allow him on his show to discuss racial conciliation and instead suggested he should call Mr. Ailes and Bill Shine, one of the network’s presidents, and “offer to sing the national anthem at the Fox News Town Halls,” according to the suit. The suit also contends that Ms. Slater demanded that minority employees arm-wrestle white female supervisors for her own “entertainment and amusement.”

Ms. Slater also mocked how black employees pronounced words like “ask” and “mother” and asked some black employees, “Who is going to Africa?” after President Trump’s travel ban, according to the suit.

Fox News has been reeling since the ouster of Mr. Ailes last summer amid a sexual harassment scandal. A New York Times investigation published this month revealed that five women had received a total of roughly $13 million to settle complaints about sexual harassment or other inappropriate behavior by Mr. O’Reilly. The network then faced an exodus by advertisers from Mr. O’Reilly’s show. Protests and denunciations by women’s rights groups followed before Mr. O’Reilly’s ouster.

On Monday, Fox News introduced a new prime-time lineup, and other cable news networks are hoping to take advantage of the upheaval to cut into Fox News’s ratings lead.

Julie Roginsky, an on-air contributor at Fox News, also filed a sexual harassment lawsuit this month against the network, Mr. Ailes and Mr. Shine. Ms. Roginsky said she had faced retaliation for refusing sexual advances from Mr. Ailes.

Also on Tuesday, Rupert Murdoch, the head of 21st Century Fox, sent a memo to Fox News employees extolling the network’s ratings from Monday night, its first night with its reconfigured prime-time lineup missing Mr. O’Reilly.

“I know the last few weeks have been tough for everyone here, but our passion for news and commitment to our viewers continue to lead us through,” Mr. Murdoch wrote in the memo, which was obtained by Business Insider. “Congratulations and thank you for all your hard work.”