

Steam's LOST Empire III



ON THE COVER

Five Nickel Plate Road Berkshires line up at Bellevue, Ohio, in October 1945. They represent the pinnacle of Lima "Super Power" steam technology. George Jay Morris for NKP, John B. Corns collection

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"Hit the injector, you idiot!"

THE BIG ENGINES

AMERICAN STEAM-LOCOMOTIVE DESIGN REACHED ITS PEAK IN 1937, ARGUES THIS CRITIC. BIGGEST WAS NOT ALWAYS BEST, HE SAYS, NOR DID DESIGN ALWAYS MATCH APPLICATION

By **Robert A. Le Massena**

One sure way to start a fight is to make disparaging remarks about someone's favorite steam locomotive. The resulting argument will eventually involve dimensions, performance, and eye appeal as standards of superiority. The debaters will discover that their claims and counterclaims have little mutual basis for meaningful comparisons, particularly when the adjectives "biggest," "best," and "mightiest" are involved. Superlatives, when applied to locomotives, have had too many interpretations for universal accord among iron-horse fanciers. Maxima of one kind or another have been cited for weight, height, width, length, boiler, firebox, cylinders, drivers, horsepower, drawbar pull, and so on, resulting in more confusion than enlightenment. Comparing actual or calculated performances is all but impossible. The three major builders used different computational methods, all of which underestimated what a locomotive could do in service. Even actual road tests could not be compared with suffi-

cient accuracy, for myriad factors had a measurable effect on performance. Designers and master mechanics alike were frequently amazed at what a new locomotive could or could not do. In the end, however, there was reasonable agreement that a "big" locomotive looked big and acted big; other engines just didn't measure up by comparison.

One of the earliest enormities of the rail was the Erie's 2-8-8-2 Triplex of 1914, which was afflicted with cylinders so cavernous and a grate so tiny that its pressure gauge fluctuated in precise accord with the movement of its pistons. Two later models of this monstrosity were built with larger grates (121 square feet instead of 90) so that more steam could be produced. One report claimed that a speed of 14 mph was attained with a 250-car, 18,000-ton train on almost level track. The Virginian was less fortunate with its terrible 2-8-8-4, which was constructed with smaller cylinders and drivers, but with only 108 square feet of grate surface. It attained unglorified fame by

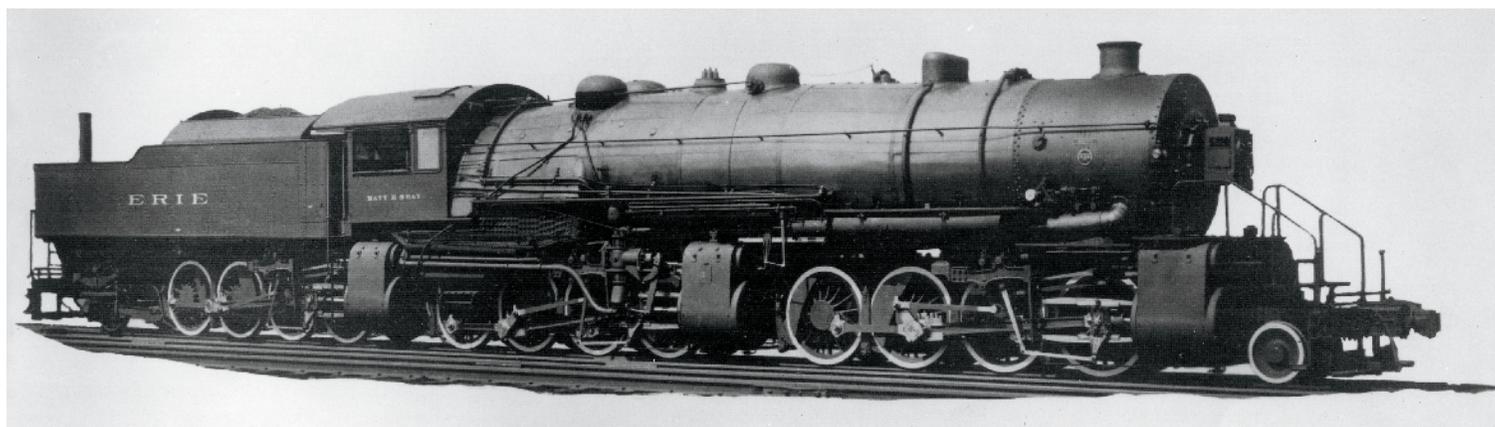
running out of steam only a short distance beyond the yard limit signs. Undeterred, the Virginian purchased several 2-10-10-2s with even larger cylinders in 1918. Although the 2-10-10-2s' grates were insignificantly larger than those of the Triplex, their boilers were considerably bigger, and the Mallets managed to get heavy trains over the road at speeds more often than not below 10 mph.

In 1918 the Pennsylvania built a simple-expansion 2-8-8-0 with 250-psi pressure and 112 square feet of grate area in its Belpaire firebox. With a machinery factor 20% greater than that of the 2-10-10-2, it set records for drawbar extraction.

All of these dinosaurs, like their flesh-and-blood predecessors, were too ponderous for their continued existence, and they were succeeded by more agile species.

RENAISSANCE IN THE 1920S

World War I and the economic dislocations that followed stifled the production of



The Erie's three class P-1 articulateds were essentially 2-8-8-0s with another eight-driver engine beneath the tender. Baldwin delivered the first, No. 5014, in 1914. The biggest problem was that of boiler capacity: the feedwater pump couldn't deliver water to the boiler fast enough for the fire to turn it to steam. Additionally, when a Triplex was in the shop, it was like having three Consolidations or Mikados out of service. Erie

FROM
AUGUST
1968
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PRR Q-2 4-4-6-4 duplex 6187 brings a westbound out of Fort Wayne, Ind., on an 0.51% ruling grade with 68 cars in February 1949. Prototype 6131 of 1944 led to 25 more, Nos. 6175-6199, in 1945. D. Allen Bauer



War is over that tree-lined horizon 9 miles east of West Trenton, and the evidence is an east-bound troop train negotiating Crusher Curve behind the tank of Reading center-cab I-8sb Consolidation 1604. The 1,400-mile road rostered more than 800 2-8-0s, built between 1880 and 1925; at 117 locomotives, the versatile I-8 was the most numerous of any Reading class.



Six miles east of West Trenton, the engineer of Reading G-1sa 106 gives his steed a careful look as he wheels an eastbound express past GH Tower at 70 mph, 10 mph shy of the New York Branch's maximum. While Pennsylvania men called their Philadelphia-New York expresses "Clockers," Reading men referred to theirs as "Yorkers."

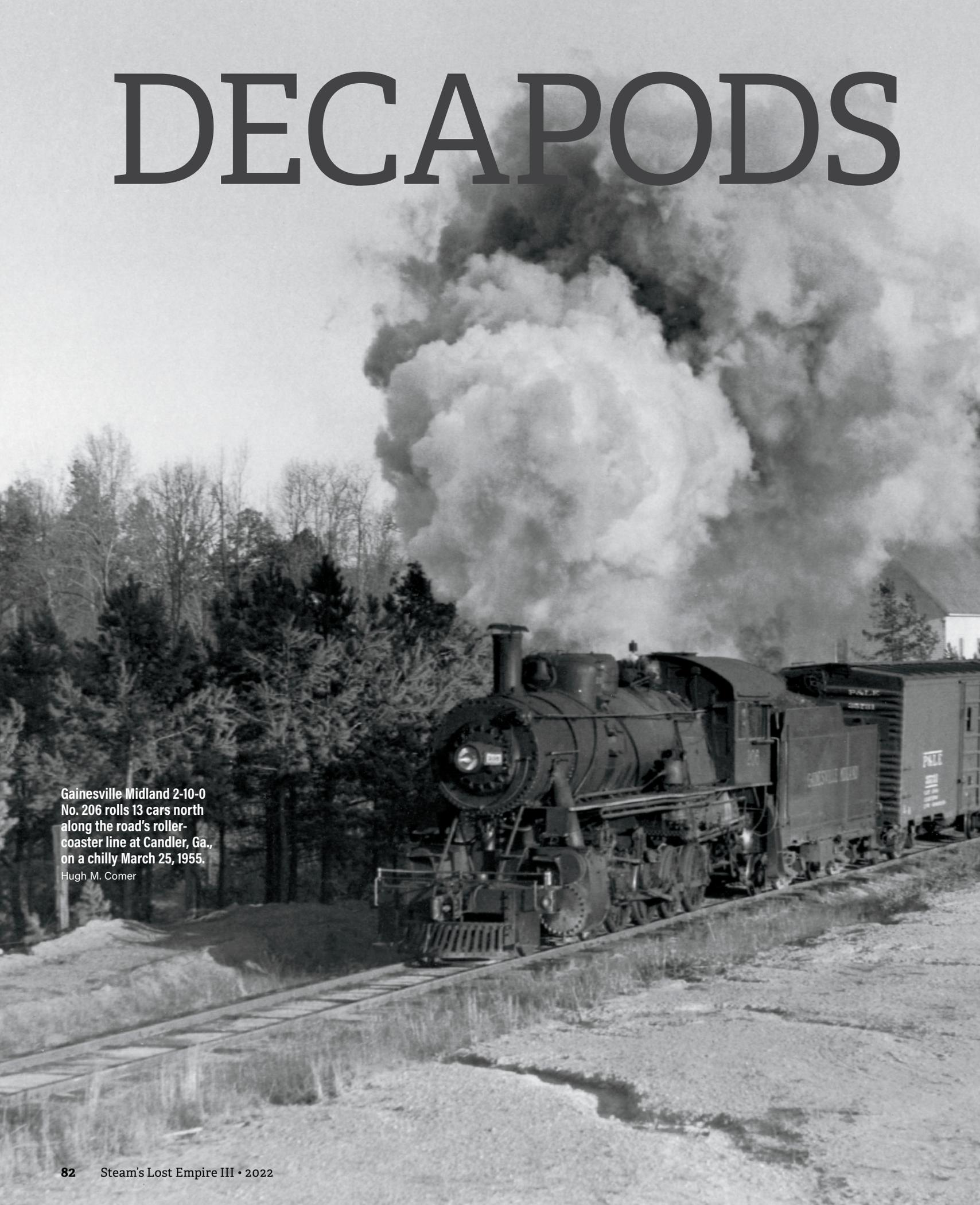


Some of West Trenton's trains were prosaic – electric M.U.'s from Philadelphia and gas-electrics from Bound Brook and Trenton. Some were exotic – including Reading's Budd-built *Crusader*, which made two Philadelphia-Jersey City round trips per day. Streamlined Pacific 118 (class G-1sas) accelerates the afternoon eastbound *Crusader* through Ewing.



The semaphore blade has already begun to fall as Reading G-2sa Pacific 178 sweeps under the signal bridge near Glen Moore with a New York-Philadelphia express. In common with Delaware & Hudson, Reading became interested in clean-lined English engines and, as a result, semi-streamlined two Pacifics. Say, is that a horn tucked under the running board?

DECAPODS



Gainesville Midland 2-10-0
No. 206 rolls 13 cars north
along the road's roller-
coaster line at Candler, Ga.,
on a chilly March 25, 1955.

Hugh M. Comer

FROM
AUGUST
1988
TRAINS
MAGAZINE

AND **red** clay

RUSSIANS AND
SPORT MODELS DREW
THE FAITHFUL TO
GEORGIA SHORT LINE
GAINESVILLE MIDLAND

By E. W. King Jr.

“Just think how much easier the Lord could have created this earth if He’d had bulldozers.”

Such a quote comes to mind when considering the Gainesville Midland Railroad, a 40-mile line in north central Georgia. If He’d had bulldozers, the Gainesville Midland might not have been nearly as interesting a railroad as it was. Its profile could have been almost flat. But the way things turned out, an awful lot of the GM’s track was laid virtually right on top of the ground.