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Note generali	"Forthcoming, volume 266, number 1295."
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	The curve, explicit divisors, and relations -- Descent calculations -- Minimal regular model, local invariants, and domination by a product of curves -- Heights and the visible subgroup -- The L-function and the BSD conjecture -- Analysis of $J[p]$ and $NS(X_d)_{\text{tor}}$ -- Index of the visible subgroup and the Tate-Shafarevich group -- Monodromy of -torsion and decomposition of the Jacobian.
Sommario/riassunto	"We study the Jacobian $J$ of the smooth projective curve $C$ of genus $r-1$ with affine model $yr = xr-1(x+1)(x+t)$ over the function field $F_p(t)$ , when $p$ is prime and $r$ [greater than or equal to] 2 is an integer prime to $p$ . When $q$ is a power of $p$ and $d$ is a positive integer, we compute the L-function of $J$ over $F_q(t^{1/d})$ and show that the Birch and Swinnerton-Dyer conjecture holds for $J$ over $F_q(t^{1/d})$ . When $d$ is divisible by $r$ and of the form $p^{[nu]} + 1$ , and $K_d := F_p([mu]d, t^{1/d})$ , we write down explicit points in $J(K_d)$ , show that they generate a subgroup $V$ of rank $(r-1)(d-2)$ whose index in $J(K_d)$ is finite and a power of $p$ , and show that the order of the Tate-Shafarevich group of $J$ over $K_d$ is $[J(K_d) : V]2$ . When $r > 2$ ,

we prove that the "new" part of  $J$  is isogenous over  $F_p(t)$  to the square of a simple abelian variety of dimension  $[\phi](r)/2$  with endomorphism algebra  $Z[[\mu]r]^+$ . For a prime with  $p \neq r$ , we prove that  $J(J)(L) = \{0\}$  for any abelian extension  $L$  of  $F_p(t)$ --

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