



PHOTO BY SHARLENE MILLER-PIZZA

An old playground gets with the times

This summer, the 1990s era playground at the Warwick Valley Community Center, made of metal, wood, and plastic, began its metamorphosis into the town's first nature play area. Fifteen teens cleared land and created a small working "loose parts" play area under three old pines, and their carpet of soft pine needles, that are near the old playground.

They were working with Daniel Mack, the creative force behind Grasshopper Grove in Cornwall, a bring-a-picnic-and-stay-all-day kind of spot where kids can cultivate their innate sense of curiosity, adventure and imagination through nature play.

"Let's bring back the mud pies; pretend to be explorers and gold miners again! Let's climb, build and

be creative using our imagination!" wrote project coordinator Sharlene Miller-Pizza.

The Community Center is looking for help developing Three Pines Play Area, targeted for kids ages two to seven. They are planning for the removal of the old playground equipment, how the nature play area coordinates with the community garden and orchards on the two-acre property, installation of appropriate fencing and re-landscaping of the area. And they are looking for writers and photographers to help document this process so other communities can make their own nature play areas.

Want to get involved? Contact Daniel Mack at rustic@warwick.net

Fish farms are the way of the future But they have to grow more than just fish

We asked a pioneering research scientist to contribute to our debate (page 32) on farmed versus wild fish. Dr. Thierry Chopin is kind of a big deal. The father of the so-called Turquoise Revolution, he was recently featured in Atlantic Business, "The Age of Algae," encouraging us to eat more seaweed. But because you can't go to ShopRite – yet – and buy seafood from the farms he works with, we decided to find another writer to help you make decisions at the fish counter today. If you're curious about the fish farms of tomorrow, read on.

Aquaculture will play an increased role in tomorrow's food production systems. However, the Blue Revolution needs to become the greener Turquoise Revolution by developing innovative technologies and practices with increased environmental sustainability, economic stability and societal acceptability.

We're working on that. With

Integrated Multi-Trophic Aquaculture (IMTA), farmers combine fish with seaweeds, aquatic plants, shellfish and other invertebrates to take advantage of synergistic interactions among them, while biomitigation takes place.

There are many variations on the IMTA theme, which can lead to the development of open-water or land-based systems, in marine or freshwater environments, and in temperate or tropical climates. Entire bays or regions could be the units of IMTA management.

There is a renewed interest in the mariculture of seaweeds for the ecosystem services they provide (nutrient biomitigation, oxygen provision, carbon sequestration, reduction of ocean acidification at local scale, etc.) and novel uses. The value of the ecosystem services provided by extractive species should be recognized, accounted for and used as financial and regulatory

incentive tools (nutrient trading credits, for example). The IMTA multi-crop diversification approach could be an economic risk mitigation and management option to address pending climate change impacts.

Society needs to realize and take advantage of the benefits of nutrients, which, in moderation, are not wastes and can be, like on land, recycled or assimilated by extractive species, which also represent additional commercial crop opportunities.

Moreover, if aquaculture is to make a major contribution to the efficient and responsible food production systems of the future, we must not only produce more — but also find more uses for — seaweeds, aquatic plants, and shellfish that act as the filtering agents in these future fish farms.

Humans will soon not be able to continue thinking of mostly land-



Magellan Aqua Farms in Canada just started incorporating kelp into chocolates.

based agronomic solutions for securing their food, but will have to turn, increasingly, to responsible aquanomy to manage their aquatic fields.

By Dr. Thierry Chopin, scientist at the Canadian Integrated Multi-Trophic Aquaculture Network, New Brunswick, Canada